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ABSTRACT

Presented is the final report of a project to provide occupational home economics teachers with learning experiences designed to increase their knowledge and skills in working with students with special needs. Three phases of the project are outlined: development, implementation, and evaluation. Results of the project are provided in table form, and it is concluded that workshops resulted in a positive change toward increased knowledge of and skill in teaching the student with special needs. Appendixes, which make up the major portion of the document, include the following materials: sample forms, questionnaires, and checklists; a workshop calendar; papers addressing such topics as the use of a token economy, axioms on special education, and characteristics of and teaching techniques for the mentally retarded; a glossary of terms; and information on module development, objectives, and activities, along with sample record sheets. (SBH)

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FINAL REPORT

WORKSHOP FOR OCCUPATIONAL HOME ECONOMICS TEACHERS

ON

WORKING WITH STUDENTS WITH SPECIAL NEEDS

by

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Project Director

December 1977
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40475

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Table of Contents

Acknowledgements.....i

Abstract.....iii

Agreement of Non Discrimination.....iv

Introduction.....1

Activities and Accomplishments

Purpose.....5

Objectives.....5

Methods.....7

Evaluation.....13

Results.....18

Conclusions.....37

Recommendations.....39

References 41

Appendices

Appendix A
Appendix B
Appendix C
Appendix D
Appendix E

ACKNOWLEDGEMENTS

The effective execution of a project of this scope and nature takes the cooperative efforts of many persons. While the initial dream and/or scheme may have been mine, the Workshop could not have come to fruition without the continued encouragement and support of Jewel Deene Ellis, Director of the Division of Home Economics Education. The willing work of the Advisory Committee made for cohesive and cooperative relationships between the participating agencies and institutions. Their precious time which was so freely given and coupled with their active participation was a critical factor in the smooth implementation of the Workshop components.

Without the hard work and cooperation of the staff and students of the Eastern Kentucky Rehabilitation Center, the Workshop could not have begun to fulfill its mission. I believe this initial joint training effort could be the first of other good things to come.

Team teaching is an often verbalized cliche - and a not so often realization. The interdisciplinary duet, unknown to each other prior to the Workshop, who came to team teach this Workshop paired their efforts in a remarkable way. Each of them brought to this undertaking a commitment to a concept and an unquestionable faith in my belief that they would be a good team - and they were! It was this faith, commitment, and vast reservoir of knowledge and skill of Grace Young, a University of Iowa home economics teacher of students with special needs, and Richard Howard, a special educator from Eastern Kentucky University, that yielded a near perfect complimentarity of roles and knowledge. Thank you seems inadequate but I know of no better words to express my personal and professional gratitude to these two fine teachers and colleagues.

To Charlene Watts, a blossoming young home economist, who served as my administrative assistant, goes a word of gratitude. It was she who performed all the necessary pre-Workshop duties, and while enrolled as a Workshop participant continued to keep things

rolling and managed to maintain a reservoir of energy to perform the majority of the "clean - up"activities.

The real stars of the Workshop were the occupational home economics teachers who came to the Workshop not fully cognizant of what they were "getting into" but jumped enthusiastically into the three weeks experience. Each participant plunged into the spirit of the program - worked diligently - experienced much and, I believe, left feeling they had just begun. They made it all worthwhile.

What will come of this pilot effort? That remains to be seen. The momentum is here - the recommendations of the participants have provided the needed nudge to extend these fledgeling efforts into full scale planning for pre-service and in-service training for home economics teachers to work with students with special needs. The time is right - the time is NOW for home economics teachers to take their rightful place in preparing students with special needs to reach their maximum potential.

ASB

D. Abstract

a. Title of Project: Workshop for Occupational Home Economics Teachers on Working with Students with Special Needs

b. Duration of Project: May 15-August 15, 1977

c. Objectives:

1. to increase the knowledge, understanding and skill of occupational home economics teachers in developing and implementing home economics and related occupational programs for students with special needs;
2. to increase the knoweldge and understanding of the needs and attitudes of occupational home economics teachers necessary for enhancement of their competency in working with students with special needs;
3. to develop a model framework for delivering in-service training to occupational home economics teachers, and potentially other vocational education teachers, to prepare them for working with students with special needs.

d. Procedure:

An Advisory Committee, composed of representatives of vociational education, vocational rehabilitation, faculty of the Departments of Home Economics and Special Education at Eastern Kentucky University, cooperating agencies and institutions, worked closely with the Director in development of a needs specific format for this three weeks workshop. The Workshop format provided a complimentary pairing of didactic and experiential learning situations under the direction of an interdisciplinary faculty team. A pre/post evaluation design was used to assess participant progress.

Participants were occupational home economics teachers in vocational/technical schools; rehabilitation centers and/or secondary wage earning programs; and one staff member from the State Division of Home Economics. The group was truly heterogenous providing a wide geographic distribution, years of experience, academic preparation and gender.

e. Contribution to Education:

Traditionally, preparation of home economics teachers, as well as other vocational education teachers, has been nearly void of experiences in working with the student who is handicapped. Although recent amendments to the Vocational Education Act have emphasized an increased thrust of working with disadvantaged and handicapped, this effort has been at best minimal. A determination by this group that "all teachers" should participate in similar experiences is a primary outcome. Based on the evaluations of the participants, it is evident that plans need to be set into place to develop a process for delivering in-service training on working with the student with special needs.

f. Products developed by the Project: Recommendations for state planning for in-service training are included in the Project Report. These recommendations include a paradigm for an in-service training delivery system.

AGREEMENT OF NONDISCRIMINATION

Title VI of the Civil Rights Act of 1964 states that no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. Therefore, the vocational education research, exemplary and dissemination program of the Commonwealth of Kentucky, like every program or activity receiving financial assistance from the U.S. Department of Health, Education and Welfare, must be operated in compliance with this law.

E. Introduction

In 1968, and again in 1972, amendments to the Vocational Education Act charged states with the responsibility of assuming a philosophical and financial commitment to provide educational experiences for students with handicaps or were disadvantaged. In 1976 the strengthened language of the amendments to the Vocational Education Act placed even greater emphasis on services to students with special needs. For the first time this legislation specified the requirement for vocational education teachers to receive training in the special education needed to provide educational experiences for the student with special needs. This important legislation complimented and strengthened the implementation of Public Law 94.142 which requires the "mainstreaming of students with handicaps" and the provision of free access routes to the least possible restrictive alternatives for students with special needs.

Nearly a decade has passed with Congress creating programs for local vocational educators to serve students with handicaps and increasing the emphasis in this direction. Unfortunately little or no action has been called for or planned for the development of teacher education programs to prepare vocational education teachers to work with the student who has a handicap. While funds were being allocated for services to students with handicaps or who were disadvantaged, there have been few resources applied to changing teacher education programs to meet this demand. There have been no mandates - no pleaing that you need change too - consequently, little effort has been made to prepare adequately vocational education teachers to work with the student with special needs.

What has heen happening? In some instances special education teachers have tried to become vocational educators and by trial and error have had some modicum of success. In other instances vocational educators have tried their hand in working with the student who had special needs. In either case this has occurred usually with little, if any, input from their counterpart, and almost no prior preparation for the task to be undertaken.

Nationally there have been a few demonstration or singular efforts to find answers to the question of how to prepare vocational education teachers to meet the challenges of these new mandates. These include efforts to identify

competencied needed by vocational education personnel to teach the student with a handicap and surveys of vocational education teachers to determine felt needs in working with the student with a handicap.

Consumer homemaking and occupational home economics teachers have added their voice to the increasing plea of vocational education teachers for help in preparing them to work with the student with special needs. Since 1968 several states, including Georgia, Ohio, Vermont, Tennessee, Wisconsin, have developed curriculum guides to assist consumer homemaking teachers in working with the student with special needs.

The inclusion of special "set aside" funds in the 1972 amendments to the Vocational Education Act brought a surge of trial or start-up programs in vocational-technical schools for the occupational preparation of students with special needs. Similarly some small percentage of Bureau of Education for the Handicapped personnel preparation funds have been channeled into the development of pre-service and in-service training models aimed at preparing or retreading the vocational education teacher to work with the student with special needs. A series of National Teacher Education workshops have been held for the expressed purpose of development of dialogue and working models of cooperation between vocational education and special education disciplines.

With a specific emphasis on home economics the reality of the situation is that almost nothing has happened despite plea for the inclusion of home economics skill training in the curriculum of students with special needs. Salvatore DiMichael challenged home economists attending the 1969 National Workshop on Home Economics in Rehabilitation that

> "... in the future much know-how and skill will have to be devoted to the mentally and emotionally handicapped... . There is evidence of spotty work by home economics with others than the physically handicapped. They should develop... activities dealing with mentally retarded, emotionally disturbed, and other handicapping conditions. ..."

The need for, and relevance of, fitting home economics into the educational objectives for the student with mental retardation has been noted by Dunn (1969):

> "... a very important objective of the school program is the development of social, family and civic skills... most

(of the girls) will become housewives, bear and raise children... also the males ... some... will remain bachelors and ... (need to) learn in school the domestic art of family living. Cooking, cleaning, mending, purchasing should be highlighted."

It is interesting that professionals, other than home economists, have been pleading and pushing for the inclusion of home economics in the realistic preparation of individuals with handicaps. But what has the home economics profession done to prepare themselves to met the challenge or to accept this responsibility? What are the special skills the home economics teacher must have to teach homemaking or home economics related occupational skills to the student who has a handicap? How can these special skills be acquired?

Some states are further along in developing programmatic answers to these questions than others. A brief review of the "state of the art" in Kentucky in preparation of vocational education teachers, and most especially home economics teachers, reveals, at best, an embryonic state of development. Although Kentucky has responded to earlier mandates of the Vocational Education Acts with a variety of demonstration programs for students who are disadvantaged or handicapped and some minimal efforts have been made by teacher training institutions to provide pre-service experiences with students with special needs, little measureable progress has been made. Increasingly teachers have been voicing their concern for help in working with additional numbers of students with handicaps. This has been especially true as the percentage of students with handicaps entering occupational or wage earning programs has continued to rise. To date, no formalized in-service training in working with students with special needs had been undertaken by any of Kentucky's institutions of higher education. Teacher certification requirements for consumer homemaking programs were revised in 1976. While these requirements will not become effective until the 1977-78 academic year, it is interesting to note that they make no specific mention of requiring graduates to have preparation in working with the student who is disadvantaged or handicapped.

The demonstration project described in this report could well be the nucleus for the growth of pre-service and in-service training programs for vocational home economics teachers - possibly for other vocational education teachers as well.

The audience selected for this demonstration project were occupational home economics teachers. The rationale for selection of this group can be found in the old adage "the screaking wheel gets the oil". While some consumer homemaking teachers had been asking state home economics supervisors for help in working with students with special needs, the more than 125 occupational home economics teachers appeared to be asking more frequently and with more fervor. The project undertaken and described in this document had one central purpose - to help gird a group of occupational home economics teachers with skills needed to work with students with handicaps. While the scope of the project has many far reaching implications, the initial efforts were exploratory, definitive, and designed to be evaluatively realistic and applicable for the real world of the teacher and the student with a handicap.

F. ACTIVITIES AND ACCOMPLISHMENTS

1. Problem Under Consideration

a). Purpose

The purpose of this project was to provide occupational home economics teachers with learning experiences designed to increase their knowledge and skills in working with students with special needs. Students with special needs, as defined for this workshop, would include those students who were identified as being either economically, academically, or socially disadvantaged, as well as physically, mentally or emotionally handicapped.

b). Objectives

Three categories of objectives were delineated: (1) those for workshop participants; (2) those for workshop faculty and staff and (3) those for the Bureau of Vocational Education.

(1) Participant Objectives

By participation in the workshop, occupational home economics teachers would

(a) increase their knowledge and understanding of handicapping conditions;

(b) increase their knowledge and understanding of adolescent and adult development

(c) increase their competency in developing and implementing occupational home economics curricula for students with special needs;

(d) increase their competency in developing and implementing learning strategies, approaches and techniques for students with special needs;

(e) increase their knowledge and skill in identifying and using community agencies as a resource for comprehensive occupational training.

(2) Faculty Objectives

By developing, implementing and evaluating the workshop, faculty would

(a) increase their understanding, and knowledge of the attitudes of occupational home economics teachers to working with students with special needs;

(b) increase their understanding and knowledge of the skill areas needed by occupational home economics teachers for working with students with special needs;

(c) develop, and submit for review by the Bureau of Vocational Education, a plan for meeting pre-service and in-service needs of occupational home economics teachers for working with students with special needs;

(d) be in a position to assist in the development of a model for preparation of all vocational education teachers to work with students with special needs.

(3) Division of Consumer and Homemaking Education and Bureau of Vocational Education Objectives

By facilitating and participating in the development, implementation and evaluation of this workshop, Bureau and Division personnel will

(a) increase their understanding and knowledge of the attitudes of occupational home economics teachers to working with students with special needs;

(b) increase their understanding and knowledge of the skill areas needed by occupational home economics teachers for working with students with special needs;

(c) be in a position to develop a plan for meeting pre-service and in-service needs of occupational home economics teachers for working with students with special needs;

(d) be in a position to develop a model for the preparation of all vocational education teachers to work with students with special needs.

2. Methods

The project was conceptualized as a three phase process model: a) development phase; b) implementation phase; and c) evaluation phase. For clarity and utilization for replication by readers of this report the methodology for the project will be presented in a similar manner with recommended time lags for each step in the sequence. This project operated on less than the time frame suggested here.

a). Development Phase

1). Appoint Advisory Committee - Six (6) months prior to workshop.

A membership roster of the Advisory Committee can be found in Appendix A. The Advisory Committee selected by the Project Director, in concert with the head of the Division of Consumer and Homemaking Education, was structured to provide maximum input from the target participant audience, faculty of the Departments of Home Economics and Special Education (other than those involved in the implementation phase) and representatives reflecting the proposed cross agency fertilization believed essential for the development of the understanding, knowledge and skills needed by participants, i.e., Bureaus of Vocational Rehabilitation, Vocational Education and Exceptional Children.

Prospective Council members were invited to participate by a personal contact of the Project Director. Following this initial contact, a follow-up letter detailing project objectives and announcing date of first meeting was sent to each Council member.

2). Advisory Committee Meetings - five (5) months and two (2) months prior to workshop.

The Advisory Committee met twice during this phase. The Committee was instrumental in refining the "needs specific" curriculum format. The Committee, collectively and individually, were most helpful in developing, and later implementing the workshop structure for a major portion of the experiential segment.

3). Recruit workshop participants - three (3) to four (4) months prior to workshop.

Letters signed by the Project Director and Head of the Division of Consumer and Homemaking Education were sent to each occupational home economics teacher.

Because of the delay in actual implementation, follow-up phone calls were made to selected teachers. These teachers were those who had indicated previously an interest or a felt need for help in working with students with special needs.

4). Recruit and hire an interdisciplinary faculty team - six (6) months prior to workshop.

This project grew out of a mutually shared interest of a member of the Special Education faculty and the Project Director. Similarly the Project Director was in close contact with the few college home economics faculty skilled in preparation of teachers to work with students with special needs. Contact with the preferred home economics faculty had been made prior to submission of the project proposal. See Appendix for faculty roster and resumes.

5) Prepare curriculum materials and learning experiences designed to enhance knowledge and skills needed by participants.

The staff of the Eastern Kentucky Rehabilitation Center developed the "hands-on" segment of the workshop. Dr. Howard and Mrs. Young developed the cross-discipline components

b). Implementation Phase

Week One.

Participants were encouraged to arrive and check in on the Sunday evening preceeding the Monday opening of the workshop. As was expected, not all participants were able to arrive prior to Monday morning. Consequently the schedule had to be adjusted to accommodate housing and scheduling rituals.

Appendix B contains the daily calendar and may be referred to as each section is read. Participants and staff arrived on Monday morning at 8:30. While drinking coffee or tea and eating donuts each person introduced themselves with a brief biographical sketch. The first step toward increasing participants knowledge and understanding of handicapping conditions, the film, Path to Fulfillment, was shown. This film depicts the potential of handicapped people if they have good prevocational and vocational education and training - showing numerous people in the work-a-day world as happily adjusted and contributing members of society.

The calendar/course outline was distributed and an overview of the workshop was given. It was immediately apparent that the vocabulary relating to the handicapped was alien to the participants. This became more evident during the following session and a vocabularly handout was begun for later distribution. Copies of these, as well as all other handout materials, can be found in Appendix C.

Two instruments, "The Professional Task Analysis" and the "Attitude Toward Handicapped Individuals Scale" were completed by the participants. (Appendix A) These were administered again at the end of the workshop as a means of objectively quantifying the effectiveness of the workshop.

The afternoon was devoted to group dynamics and encounter type activities to assist the participants in becoming a cohesive group. Activities and initial sensitization planned workshop experiences were designed to get the group more intimately acquainted and caused members to examine attitudes and issues.

The staff at the Eastern Kentucky Comprehensive Rehabilitation Center (EKCRC) was ready for the group on Tuesday afternoon. We were housed on the fifth floor of the dormitory so that we could become more intimately acquainted with the staff and clients. (Clients will refer to the persons being rehabilitated. They are often called students by the staff). After checking into our rooms and eating lunch in the cafeteria we met with Janice Owen and colleagues. They used an elastic bandage to bind the dominant hand of each person. This simulated handicap was to be with us until bed time that evening.

We were then taken on a tour of the facility. The balance of the afternoon and the following day were devoted to lecture and demonstrations by Center personnel relating total treatment available to clients.

Previously the group had been encouraged to plan for dinner at a nearby state park. This was designed so the group could internalize some problems of people with handicaps. Being seen in public with the bound hand and eating a meal with the non-dominant hand was a valuable experience as is discussed in the Results section.

Workshop participants were encouraged to interact with Center clients so they could better identify with and understand them as individuals. Wednesday afternoon participants met the specific clients to which they were assigned the following day. Refreshments were served and each participant selected a card, at random, with one or more client names on them. Considerable time was spent in client(s) and participant getting to know each other.

Workshop participants met on Thursday A.M. with their client and began to simulate the handicap. Some spent the day in a wheelchair; some on crutches, and others walking with their clients to breakfast, classes, and lunch. The group returned to the campus late Thursday.

Friday morning participants evaluated the EKCRC experience and open discussions were held relating to that experience. The balance of the morning was spent acquainting the participants with the Eastern Kentucky University library, with emphasis on reference works and periodicals relating to persons with handicaps.

Week Two

The second week got underway with a preview of the balance of the workshop. Participants were asked to list omitted needs in the workshop design. This discussion brought to light two important factors. The Curriculum Development Center (CDC), housed at the University of Kentucky contained many materials that could be useful to participants in working on their modules and lesson plans. It was at this point that the workshop staff learned that the CDC was in the process of writing modules for statewide distribution and that they would eventually provide all vocational and occupational teachers with modules. Several of the participants had written modules and considered themselves proficient in the procedure. Guidelines for module development are included in Appendix C.

This new information necessitated a change of plans since one of the operational objectives had been to teach the participants to write modules. Since over one-third of the participants had written them and the rest would probably never have to write one, it was decided to adapt a module to the needs of the handicapped and to concentrate on lesson plans for the return trip to the EKCRC. A part of the workshop design was to have the participant actually teach a lesson to the handicapped clients at the EKCRC. While there each participant had been assigned a specific lesson to teach when they returned the following week. A second change occurred in that a staff member and a participant were sent to the CDC to evaluate the possible value of a field trip.

The balance of Monday morning was devoted to the EKU library holdings relative to the student with a handicap. Specifically the Curriculum Resource Center exposed the participants to materials available to them during the workshop.

Usually afternoons on campus were used by participants to work on lesson plans and modules. Staff were available to assist participants in their activities. Afternoons were just as busy as mornings. On the second Monday afternoon a Module on writing modules was distributed to each participant. Sample modules were distributed, with suggestions as to how they might be adapted for the students with handicaps.

Tuesday, Wednesday, and Thursday did not follow the calendar. A copy of adjusted calendar is included in Appendix B. Tuesday morning was devoted to a lecture on the handicapped and writing Individual Works Plans (IWP). Handouts included a Primer on Individual Education Plans.*

The decision was made to take a field trip to the CDC at the University of Kentucky on Wednesday morning.

In view of the loss of Wednesday morning for lecture, it was decided to spend some time on Tuesday afternoon on Public Law 94-142, The Education of the Handicapped Act. The least restrictive concept was explained and the resultant rationale for requiring individual educational or work plans (IEP and IWP). Public Law 94-482 requires vocational and rehabilitation teachers to be in compliance with Public Law 94-142 when teaching a child with a handicap.

Thursday morning was devoted to discussion of writing behavioral objectives and task analysis. Schedules were set up for meeting with each participant in the afternoon to review their progress on lesson plans and modules.

Friday morning the group visited Cardinal Hill Hospital and Rehabilitation Center. The group toured the facility and then the balance of the time was spent in the rehabilitation area.

Week Three

Monday morning the experience at Cardinal Hill was discussed. A film, Try Another Way, was shown and discussed. This film depicts a method of teaching clients who are severely and profoundly retarded. The film elicited a great deal of discussion. Slides taken at EKCRC were shown.

*Council for Exceptional Children Foundation. Primer on Individual Education Plans. Reston, Virginia. 1977.

Tuesday was spent with the participants in assisting them with their final plans related to modules and lesson plans.

Wednesday morning the group returned to EKCRC. Participants spent the afternoon becoming familiar with activities of the classrooms where they would be doing their teaching the following morning.

On Thursday morning participants taught their mini-modules to the designated classes. Following the teaching session, clients and participants met together to discuss all matters relating to the EKCRC workshop phase. We returned to EKU Thursday afternoon.

Friday morning each participant wrote an evaluation of their teaching experience at the EKCRC. This was followed by completing the two questionnaires, the Professional Task Analysis and the Attitude Toward Handicapped Individuals. (Appendix A.) The final phase of evaluation consisted of completing a staff developed evaluative instrument. (Appendix D) This evaluation was then reviewed by the group so that each participant could share his or her thoughts regarding the workshop experience.

The staff endeavored to provide opportunities for social and cultural experiences on a voluntary basis for the group. All participants took part in these activities to some extent.

Aim of the objectives of the workshop was to increase the participants knowledge and skill in identifying and using community agencies for comprehensive occupational training. This was done throughout the workshop as various topics were covered. Appendix E contains a listing of agencies and sources that may be used in an ongoing manner. These sources may be used at any time that a teacher needs assistance in dealing with children with handicaps.

c). Evaluation

(1) Participant Objectives

a). Pre-post assessment

Change score analysis of participants on the Attitudes Toward Handicapped Individuals and Professional Task Analysis

was selected as the process for assessing the degree to which participants objectives were achieved. A more subjective approach was utilized by having participants complete a project developed Lickert type scale. Following completion of this evaluation instrument workshop participants and faculty evaluated the workshop in an open forum on the last day of the workshop. See Results section for more detailed discussion.

(2) Faculty Objectives

Each faculty member completed an evaluation form similar to that of the participants. Similarly each faculty member prepared a brief written evaluation summary of the workshop with an especial emphasis on utilization of the structure and content of this workshop in development of a pre-service/in-service training model.

(3) Bureau Objectives

The Bureau will use results and recommendations generated by this project in development of plans for increasing the skills and knowledge of vocational education teachers in working with students with special needs.

TABLE I

FINAL PARTICIPANT EVALUATION

Workshop For Occupational
Home Economics Teachers
Working With Special Needs
Students

Eastern Kentucky University
Department of Home Economics

July 18-August 5, 1977

Please give careful consideration to your responses. Replies will be used to determine further direction and to plan additional workshops.

Please check the appropriate column:		Mean
1.	Encounter Session	2.9
2.	Film, Path To Fulfillment EMH	4.1
3.	Film, Try Another Way TMH	5.0
4.	Thelma Experience	
	a. Interaction with staff	4.6
	b. Interaction with students	4.6
	c. Tour of facility	4.4
	d. Simulation of a handicap (Bound hand)	3.9

e.	Free-time interaction with students	4.2
f.	Six-hour simulation (wheelchair, crutch)	4.1
5.	Thelma Lectures	
a.	"What Is a Disability" Linda Nichols, Adjustment Counselor	4.6
b.	"Causes and Types" Linda Omer, Physical Therapist	4.6
c.	"Medication" Linda Young, Nurse	4.6
d.	"Special Equipment" Janie Owen, Home Economist & D. Songlier, Occupational Therapy	4.6
e.	"Psychological and Social Effects" Linda Nichols	4.4
f.	"Overview" Jim Williams	3.9
6.	Your Teaching Experience at Thelma	4.0
7.	Library	
a.	Reference	3.7
b.	Documents	3.1
c.	Learning Resource Center	3.6
8.	Public Law 94-142	4.4
9.	Due Process - Individual Work Plan	4.3
10.	Module	
a.	Guide to Developing Modules	4.1
b.	Handouts	3.1
11.	Field Trip - Cardinal Hill Hospital	4.7
12.	Field Trip - Curriculum Development Center	3.6
13.	Participant Interaction	4.9
	Total Mean	4.1

Interpretation of the majority of the items is not needed. However, the open-ended questions bear detailing.

Item 13 asked participants if they had it to do over, how would they alter the workshop for reproduction next summer. There was a definite trend toward certain persistent comments. Examples are listed below.

1. Participants should be chosen earlier.

2. Written course outline should be sent to the participants well in advance so that personal and family problems could be more adequately dealt with.

3. No commuters. Home duties interfere with workshop demands.

Other suggestions given by two or more people:

More writing of Individual Education Plans
More practicum time with students
Mornings only for Staff participation. Use all afternoons for work in library and on assignments.
Too concentrated - too demanding.
Use Home Economist (Grace Young) to a greater degree.
Do not write modules.
Adapt existing modules for use with the student with a handicap.
Give more theory, characteristics and teaching techniques relative to the student with a handicap.
Go to EKCRC later in workshop.

Item 14, "Do you think your colleagues (vocational education teachers) would benefit from an in-service workshop of this nature?", received an affirmative of 100%. The same was true of Item 15 relating to administrators participation, although most participants agreed that the time element must be greatly reduced for them.

Item 17 asking for additional comments contained little new. Most remarks were repetitive of number 13 listed above.

Item 18 was devoted to instructor evaluation. They were mostly positive. In fact out of a possible 13 negatives, only three were listed - one for Mrs. Young and two for Dr. Howard. However, it is entirely possible that the addage, "Don't say anything about someone unless it's good," could have been in operation. There could have been 252 positive check marks for

each instructor, whereas there were only 171 for Mrs. Young and 137 for Dr. Howard. Positives left blank were 81 and 115 respectively. Upon Examination of elements in Item 18, one would not expect any one to check all positives. "Average" for instance could be considered a positive, but in this instance was counted as a negative based on the assumption that average instructors would not be selected to conduct a workshop of this nature.

Because of the bulky nature of the modules, the lesson plans and self evaluations of the teaching of them, are not included in the Appendix. Every participant except one, rated themselves "excellent" or grade A and that one received a self-analysis of B in the mini-module or practicum. Instructors would tend to agree with these ratings. The participants were experienced teachers and were given careful indiviual assistance by the workshop faculty in adapting lesson plans to the handicapping conditions of the clients being taught.

In analyzing the modules written, it is apparent that adaption of modules were geared to students who were mentally handicapped or educationally retarded more than any other. This would be expected since both instructors had had primary experience with students with mental handicaps. It is also true that most of the clients/students taught would be classified as being a slow learner or educable mentally handicapped.

3. Results

The purpose of this project was to develop, implement and evaluate a short-term project that would provide occupational home economics teachers with learning experiences designed to increase their knowledge, and understanding of, and skill in, working with students with special needs. Additional objectives were to promote important foundation information for the development of models for the preservice and in-service preparation of occupational home economics, teachers with the possible spin off of applicability of training to other vocational education teachers. These results, if they can be defined in this manner, are found in the conclusions section.

The three week workshop was conducted on the campus of Eastern Kentucky University in Richmond between July 18 and August 5. A portion of the experiential training was held on the campus of the Eastern Kentucky Comprehensive Rehabilitation Center in Thelma.

Initially, seventeen occupational home economics teachers were to enroll - two chose not to complete enrollment procedures due to personal and/or family reasons. One senior home economics education major participated in the workshop, as well as being employed in a Cooperative Education experience as a member of the workshop staff.

Dr. Richard Howard, Associate Professor in Eastern's Department of Special Education and Mrs. Grace Young, Family Living Consultant of the University of Iowa University Affiliated Center for Mental Retardation, Iowa City, served as the full-time faculty team. The project director was involved in a number of teaching activities as well as the administrative and coordinative functions of the project. Various staff members of the Rehabilitation Center participated as practium instructors with workshop participants.

As indicated earlier three forms of participant evaluation were used: staff developed evaluation form, pre-post assessment using the PTA and the ATHI, and an open forum at the close of the workshop. In reviewing each of these methods indiviually, and the group as a whole, it is evident that the workshop can be termed a "success". There was positive change in the level of knowledge, skill and understanding of the participants toward the student with special needs. Similarly there was valuable information revived that will be useful in developing further training experiences for vocational teachers in working with the student with special needs.

Presented in Table I are mean scores for each item on the staff developed instrument.

Analysis of results from the pre and post Professional Task Analysis questionnaires, is found in Table 2, indicating goal attainment of student objectives. There were four groups of needs: Planning Instruction; Implementing Instruction and Evaluating Programs and Instruction. Participants rated these on three dimensions: Amount of time spent on the tasks; Criticality (How critical is successful performance of this task to overall effectiveness of your program?), Area of need (as a local educator working with special needs students, do I need to know more about this task?).

Item One relating to assessment of program and student was seen as a critical need on the part of the participants. This score did not change in that they interpreted these factors to be highly important before and after the workshop. They viewed themselves as being better able to meet those needs as a result of the workshop. A positive change score of 2.57 points is the smallest gain of the four major groups of needs. This would be expected because the workshop dealt with this area only incidentally. Participants shared with each other a great deal in the three weeks. The tours of the Eastern Kentucky Comprehensive Rehabilitation Center and interaction with Center staff could conceivably account for this small but important growth factor.

As evidenced by the data in Tables 2 and 3, Item Two and Three contain a more pertinent list of workshop content, and as was hoped for in this innovative project, there was the greatest degree of growth. Participants were more acutely aware of the needs of students with handicaps and evidenced confidence in their ability to meet those needs. It is expected that the teaching at EKCRC, planning of the lessons and working with the modules accounted for much of this gain.

The last group of needs, Item Four, dealing with evaluation shows a gain of five points. The data also revealed that participants now viewed this area as extremely critical. They seemed to be saying, "We have learned a little in evaluative techniques but our need in this area is still very great."

The Final Evaluation (Appendix D) analyzed above revealed a subjective self evaluation in a very positive manner. The P.T.A. analysis agrees with this although not as loudly. As noted earlier written comments on the first evaluations written indicated several participants felt the workshop had not fulfilled its purpose to them as it relates to the special needs students. At the same time both subjective and objective data say otherwise. It is the belief of the staff that the participants are so accustomed to didactic instruction they have difficulty in perceiving real growth within themselves from participatory, "do-it-yourself" instruction.

TABLE 2

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
1.00	Assessing program and learner needs			
1.01	Develop a rationale, program goals and philosophy for a special needs program	3.6	4.1	+.5
1.02	Analyze local or regional job market and employment trends	3.9	3.6	-.3
1.03	Identify occupations and clusters of occupations	3.5	3.2	-.3
1.04	Analyze students' occupational interests and aptitudes	3.5	3.5	
1.05	Develop and use screening-referral processes for identification of students	3.5	3.4	-.1
1.06	Collaborate with other educators, specialists, and parents in evaluating the learner's educational needs	4.0	3.8	-.2
1.07	Administer or use diagnostic assessment techniques	3.2	3.4	+.2

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
2.00	Planning Instruction			
2.01	Establish and/or use program advisory committees	3.6	4.1	+.5
2.02	Identify a variety of community and governmental agency resources in planning instructional programs and services	3.6	3.6	
2.03	Analyze occupational/career clusters to determine relevant instructional content (competencies needed in the world of work)	3.8	3.4	-.4
2.04	Identify the basic aptitudes and competencies (e.g., finger dexterity or sequencing skills) required for employment in a given career	3.8	4.2	+.4
2.05	Collect and use available assessment information	4.0	3.5	-.5
2.06	Identify available assessment instruments appropriate for special needs students	3.2	3.4	+.2

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
2.07	Use diagnostic and prescriptive assessment techniques for planning instruction	3.4	4.0	+.6
2.08	Prepare alternative assessment procedures	3.5	3.8	+.3
2.09	Plan a sequence of modules or units of instruction according to the learner's needs	4.3	4.0	-.3
2.10	Coordinate with instructional planning in academic areas for students with learning problems (reading, math, and other academic areas required for graduattion)	3.2	4.2	+1.0
2.11	Develop individual student performance goals and objectives	3.8	4.0	+.2
2.12	Identify instructional resource personnel (e.g., reading specialists and bilinguists) capable of providing supportive help for special needs learners	3.8	4.2	+.4

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
2.13	Identify instructional techniques appropriate for special needs learners	3.8	4.1	+.3
3.00	Implementing instruction			
3.01	Use a variety of community and governmental agency resources in the delivery of supportive services and instruction	3.7	3.5	-.2
3.02	Consult with other teachers to facilitate adequate performance of students in classes outside of the career-oriented program	4.1	3.7	-.4
3.03	Develop, utilize and evaluate procedures for communicating with parents	3.2	3.6	+.4
3.04	Develop, coordinate and evaluate a community relations program	3.4	4.1	+.7
3.05	Manage and modify, when necessary, the tools, equipment, facilities or conditions in the learning environment	4.0	3.9	-.1

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
3.06	Organize and use a "buddy system" for special needs learners	3.3	3.8	+.5
3.07	Develop, use and evaluate job samples designed to teach specific occupational skills	3.2	3.4	+.2
3.08	Develop and use simulated job application and interview procedures	3.3	3.8	+.5
3.09	Select or modify instrucitonal materials appropriate for different special needs learners	4.1	4.0	+.1
3.10	Develop instructional materials for special needs learners			
3.11	Plan and coordinate on-campus work (on-the-job) instruction	3.1	4.0	+.9
3.12	Plan and coordinate off-campus work (on-the-job) instruction	3.8	3.5	-.3
3.13	Use instructional techniques that individualize instruction (e.g., peer instruction, small group instruction or programmed instruction)	3.4	3.9	+.5

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$)		Change Score
		First	Second	
3.14	Employ techniques or principles of special instruction (e.g., discrimination learning or cue redundancy)	3.8	3.8	
3.15	Identify and control problem behavior in the classroom using behavioral management techniques	3.7	3.5	-.2
3.16	Provide reinforcement for learning	3.5	3.3	+.2
3.17	Provide career counseling and guidance	3.7	4.0	+.3
3.18	Provide work adjustment counseling	3.7	2.8	-.9
3.19	Provide personal counseling	3.5	3.8	+.3
3.20	Provide and/or coordinate job placement services for special needs learners	3.8	4.1	+.3
3.21	Train employers and supervisors to work effectively with special needs learners	3.1	4.0	+.9

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$) First	Second	Change Score
4.00	Evaluating program and instruction			
4.01	Develop instruments and procedures appropriate for assessing the achievement of special needs learners	3.3	4.1	+.8
4.02	Design and implement a system for monitoring and feeding back student progress and acheivement on a regular basis	3.5	3.8	+.3
4.03	Assess the cognitive performance of special needs learners	2.7	4.0	+1.3
4.04	Assess the affective performance of special needs learners	3.6	4.0	+.4
4.05	Assess the psychomotor/perceptual performance of special needs learners	3.4	3.8	+.4
4.06	Obtain follow-up information on special needs students leaving or graduating from school programs	3.5	4.1	+.6
4.07	Evaluate and upgrade the effectiveness of the total special needs program			

TABLE 2 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Criticality Rating ($\bar{X} > 3.2$)		Change Score
		First	Second	
4.08	Conduct a comprehensive evalation of the total special needs program	3.4	4.3	+.9

TABLE 3

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$)		Change Score
		First	Second	
1.00	Assessing program and learner needs			
1.01	Develop a rationale, program goals and philosophy for a special needs program	4.4	3.6	-.8
1.02	Analyze local or regional job market and employment trends	3.8	3.1	-.7
1.03	Identify occupations and clusters of occupations	3.1	3.0	-.1
1.04	Analyze students' occupational interests and aptitudes	2.8	3.0	+.2
1.05	Develop and use screening referral processes for identification of students	3.2	3.1	-.1
1.06	Collaborate with other educators, specialists and parents in evaluating the learner's educational needs	3.3	3.5	+.2
1.07	Administer or use diagnostic assessment techniques	3.3	3.2	-.1

TABLE 3 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$) First	Second	Change Score
2.00	Planning instruction			
2.01	Establish and/or use program advisory committees	3.4	3.2	-.2
2.02	Identify a variety of community and governmental agency resources in planning instructional programs and services	3.6	3.1	-.5
2.03	Analyze occupational/career clusters to determine relevant instructional content (competencies needed in the world of work)	3.5	3.1	-.4
2.04	Identify the basic aptitudes and competencies (e.g.finger dexterity or sequencing skills) required for employment in a given career	3.5	3.1	-.4
2.05	Collect and use available assessment information	3.9	3.2	-.7
2.06	Identify available assessment instruments appropriate for special needs students	3.3	3.5	+.2
2.07	Use diagnostic and prescriptive assessment techniques for planning instruction	3.9	3.1	-.8

TABLE 3 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating (X > 3.2) First	Second	Change Score
2.08	Prepare alternative assessment procedures	3.8	3.0	-.8
2.09	Plan a sequence of modules or units of instruction according to the learner's needs	4.3	2.8	-1.5
2.10	Coordinate with instructional planning in academic areas for students with learning problems (reading, math and other academic areas required for graduation)	3.6	3.1	-.5
2.11	Develop individual student performance goals and objectives	3.8	3.5	-.3
2.12	Identify instruction resource personnel (e.g., reading specialists and bilinguists) capable of providing supportive help for special needs learners	3.8	3.0	-.8
3.00	Implementing Instruction			
3.01	Use a variety of community and governmental agency resources in the delivery of supportive services and instruction	3.8	2.6	-1.0

TABLE 3 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$) First	Second	Change Score
3.02	Consult with other teachers to facilitate adequate performance of students in classes outside of the career-oriented special program	3.8	2.9	-.9
3.03	Develop, utilize and evaluate procedures for communicating with parents	3.5	2.8	-.7
3.04	Develop, coordinate and evaluate a community relations program	3.7	3.1	-.6
3.05	Manage and modify when necessary hand tools, equipment, facilities or conditions in the learning environment	3.8	3.4	-.4
3.06	Organize and use a "buddy system" for special needs learners	3.4	2.8	-.6
3.07	Develop, use and evaluate job samples designed to teach specific occupational skills	3.3	2.5	-.8
3.08	Develop and use simulated job application and interview procedures	3.1	2.7	-.4

TABLE 3 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$) First	Second	Change Score
3.09	Select or modify instructional materials appropriate for different special needs learners	3.7	3.5	-.2
3.10	Develop instructional materials for special needs learners	4.1	3.3	-.8
3.11	Plan and coordinate on-campus work (on-the-job) instruction	3.4	3.2	-.2
3.12	Plan and coordinate off-campus work (on-the-job)instruction	3.4	2.6	-.8
3.13	Use instructional techniques that individualize instruction (e.g., peer instruction, small group instruction, or programmed instruction)	3.2	3.1	-.1
3.14	Employ techniques or principles of special instruction (e.g., discrimination learning or cue redundancy)	3.6	3.3	-.3
3.15	Identify and control problem behaviors in the classroom using behavioral management techniques	3.8	3.1	-.7

TABLE3 (continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$) First	Second	Change Score
3.16	Provide reinforcement for learning	3.5	3.0	-.5
3.17	Provide career counseling and guidance	3.2	2.6	-.6
3.18	Provide work adjustment counseling	3.5	3.1	-.4
3.19	Provide personal counseling	3.3	3.1	-.2
3.20	Provide and/or coordinate job placement services for special needs learners	4.0	2.8	-1.2
3.21	Train employers and supervisors to work effectively with special needs learners			
4.00	Evaluating program and instruction			
4.01	Develop instruments and procedures appropriate for assessing the achievement of special needs learners	3.5	3.4	-.1
4.02	Design and implement a system for monitoring and feeding back student progress and achievement on a regular basis	3.3	3.4	-.1

TABLE 3(continued)

Professional Task Analysis Questionnaire

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

	PROFESSIONAL TASKS	Mean Perceived Area of Need Rating ($\bar{X} > 3.2$) First	Second	Change Score
4.03	Assess the cognitive performance of special needs learners	3.6	2.8	-.8
4.04	Assess the affective performance of special needs learners	3.8	3.2	-.6
4.05	Assess the psychomotor performance of special needs learners	3.9	3.2	-.7
4.06	Obtain follow-up information on special needs learners leaving orgraduating from school programs	3.5	3.0	-.5
4.07	Evaluate and upgrade the effectiveness of instruction	3.6	3.2	-.4
4.08	Conduct a comprehensive evaluation of the total special needs program	3.7	3.5	-.2

The attitude toward handicapped indiviuals *scale in a twenty (20) item scale* on which acceptance, understanding and perception of differences are measured on a six point Likert type scale with a score range of 0 to 120. This scale is a modification of the attitude toward disabled persons (Lazar, 1973). The basis modification consisting of the substitution of the term handicapped for disabled with the rationale being that the term handicapped has a more general meaning than disabled. The relationship between these two scaled was significant at the .01 level (Stodden, Graves, Lazar, 1973).

Attitudes of teachers toward their students has proven to be a significant factor in the teacher's effectiveness. Considerable rhetoric has been presented relating to attitudes of non-special education teachers to the student with a handicap. Labeling of children has proven to be related to attitude of teachers toward children with handicaps (Frerichs and Adelman, 1974).

Participants completed the ATHI at the beginning and conclusion of the workshop. As seen in Table 4, there was a change in the pre and post scores of points. However, it is important to note that the mean group score for the pre test was higher than the national average of X = 70. From this data it would appear that this group of occupational home economics teachers came to the workshop with a positive attitude toward the student with special needs - and left the workshop with an even more positive attitude. Since the results of the PTA reflected a change in definitions of criticality of tasks and the need to know, it is rewarding to note a positive increase in the attitude of this group of teachers toward individuals with handicaps.

TABLE 4

Attitude Toward Handicapped Indiviuals

Occupational Home Economics Teacher Workshop
Eastern Kentucky University, 1977

TESTS	MEAN SCORES	MEAN GAIN
Pre	79	
Post	83	4.0

4. Conclusions

Analysis of evaluative instruments, both objective and subjective, indicate that the workshop was successful. Participants evidenced change in the positive direction of their attitudes toward individuals with handicaps. The final evaluation of workshop content reflected the appropriateness of workshop activities to the needs of the majority of the participants. Pre and post analysis of the Professional Task Analaysis Questionnaire reflected a positive change toward increased knowledge of and skill in teaching the student with special needs.

Scores on the pre PTA indicated that occupational home economics teachers see the need for more knowledge and skills relative to the student with special needs. This is in keeping with data from a number of sources including an Ohio survey of consumer homemaking teachers conducted in 1973 by Dr. Bardwell and data from the initial review of the data from a Kentucky survey conducted in the summer of 1977 by Dr. Howard in cooperation with Dr. Bardwell. A copy of the results of this latter study will be made available to the Bureau of Vocational Education for their further utilization in planning for in-service education activities.

It is apparent that certain changes should be made in the format and development of future workshops.

These are:

... earlier selection of participants is vital;
... pre-package materials for distribution prior to the workshop;
... administration of PTA and ATHI prior to opening of the workshop to be used in more definitively developing a needs specific workshop.

Since participants revealed deficits at both the knowledge and application level, it is reasonable to assume that the knowledge level should be treated first. Participatory "do it yourself" workshops could be more concentrated and less time consuming. A conclusion and ultimate recommendation would include the utilization of self-mediated instructional programs which would address the knowledge level, or cognitive needs of participants, with application needs being met through in-service workshops, mini and maxi, at home or on college campuses. It is believed that teachers should be able, given cognitive support, to adapt much of their traditional preparation to providing meaningful educational experiences for the student with special needs.

There is little doubt that the Advisory Committee process, such as the one organized for this project, should be maintained. The involvement of the Advisory Committee facilitates the critical linkage of the habilitation components needed for the vocational preparation of the student with special needs. The Project Director, in concert with the Advisory Committee, will be able to investigate more thoroughly existing practices and utilization of relevant training sites.

The information gleaned from the PTA was most helpful in development and modification of the content of the workshop. A conclusion drawn from the final evaluations would be that there is a need to continue to refine and detail the competencies needed by vocational education teachers to work effectively with the student with special needs.

5. Recommendations

For the sake of clarity and brevity, recommendations have been divided into three categories: a) In-Service Preparation; b) Pre-Service Preparation and c) General.

a) In-Service Preparation

(1) Reproduce this workshop annually, with moderate alterations, in each regional university and/or community college. Settings could also include regional vocational and rehabilitation facilities.

(2) Break the workshop into mini-workshops for week-ends, five day 3 to 6 or 6 to 9 p.m. hours, as in-service projects. Subjects to be covered could be:
   (a) Public Law 94-142 and 94:482
   (b) IEP's and IWP's
   (c) Writing Behavioral Objectives
   (d) Task Analysis
   (e) Teaching Techniques for Use with Special Needs Populations
   (f) Characteristics of Special Needs Populations

(3) Develop mini in-service workshops for administrators of vocational, occupational and rehabilitation schools or centers.

b) Pre-service Implications

(1) Future teachers in occupational and vocational education should be required to take courses related to special needs students. That is, certification guidelines delineate specific competencies or courses in special education.

(2) Inter and intra-college cooperation in the design of curricular offerings should be requested--i.e. Occupational and Physical Therapy faculty in Colleges of Allied Health, Special Education, Faculty in College of Education, Industrial Arts and Home Economics Faculty in Colleges of Applied Arts and Technology.

(3) Teacher training enstitution proposals be more specific in how needs in special education will be met.

(4) Student teaching assignments include work assignments with studens with special needs.
(5) Explore the possibility of turning out dually certificated personnel such as Rehabilitation Counselors and Special Education Teachers or Special and Industrial Arts Educators. Stout State University, Menomonie, Wisc. are now engaged in some of these programs.

c) General Recommendations

(1) Develop a follow-up questionnaire to be sent to the participants in this workshop to ascertain the value of the workshop during the school year.
(2) Use participants as consultants or trainers for regional and local mini workshops.
(3) Plan teacher exchanges within occupational and vocational classrooms.
(4) Plan for vocational and occupational teachers in isolated areas to visit schools and facilities serving special needs populations such as Mill Creek and Lyndon schools in Jefferson County, Cardinal Hill Hospital in Lexington or the EKCRC at Thelma, Kentucky
(5) Develop video and audio tapes for in-service training.
(6) Develop a booklet entitled knowing the adolescent with special needs; A Primer and circulating it to all vocational/occupational teachers within the state.
(7) Develop a competency based correspondence course for vocation/occupational teachers.

REFERENCES

DiMichael, Salvatore. Address presented at the 2nd Interdisciplinary Conference on Home Ecpnomics in Rehabilitation, in Proceedings of the Conference. Washington, D.C.: American Home Economics Association, 1969.

Dunn, L.M. "Educating Mentally Retarded Children", in Exceptional Children in the Schools, Boston: Houghton Mifflin Co., 1969.

Frerichs, A.H. and Adelman, S.I. Labeling of Students By Prospective Teachers. Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1974.

Hackett, B. "Competencies for Occupational Teachers". Normal, Illinois: Illinois State University, Preservice Occupational Origram Project, 1974.

Lazar, A.L., Orpet, R. and Demos, G. The Impact of Class Instruction in Changing Student Attitudes. Paper presented at the 52nd Annual Meeting of the California Educational Research Association, November 1973.

Melby, A. and Regal, J. "Special Education Competencies" in Kruppa, J.R. et al. Preparing Teachers of Industrial Education for Disadvantaged and Handicapped Children at the Secondary Level. Project Final Report. Trenton, New Jersey: Division of Vocational Education, State Department of Education, 1973.

Primer on Individual Education Plans. Reston, Virginia: Council for Exceptional Children, 1977.

"Professional Task Analysis Questionnaire" in Vocational Education for the Special Needs Student: Competencies and Models for Personnel Preparation. Report of a National Teacher Education Workshop. Urbana-Champaign: University of Illinois Bureau of Educational Research, 1976.

Stodden, R., Gr aves, M. and Lazar, A.L. The Relationship Between the ATDP and the ATHI Scales for Assessing Attitudes. Paper presented at the 52nd Annual Meeting of the California Educational Research Association, November 1973.

APPENDIX A

APPLICATION FOR

OCCUPATIONAL HOME ECONOMICS SPECIAL NEEDS WORKSHOP

Eastern Kentucky University
Department of Home Economics
Summer 1977

Name:

Home Address: Telephone Number:

Position: _____ Title of Occupational Program: _____
Be Specific

Name of School or Center: _____ Address: _____

Highest degree held: Major area of study:

_____ B.S. _____ Bachelor's Degree

_____ M.S. _____ Master's Degree

_____ Specialist

List by handicap (special need) number of students enrolled in your program:

_____ educable mental retardation

_____ trainable mental retardation

_____ learning disabled

_____ emotionally disturbed

_____ behavior disorder

_____ orthopedically handicapped

_____ deaf/hard of hearing

_____ blind/partially sighted

_____ gifted

_____ speech and language disabled

Please list your objectives for participation in the Workshop and a rationale for your selection as a participant.

MEMBERSHIP ROSTER

ADVISORY COMMITTEE TO

WORKSHOP FOR OCCUPATIONAL TEACHERS IN

WORKING WITH STUDENTS WITH SPECIAL NEEDS

Eastern Kentucky University
Department of Home Economics
Summer 1977

Blackwell, Margarita Ms.	Asst. Professor, Department of Home Economics, EKU
Watts, Charlene	EKU, Student
Briscoe, Melissa Ms.	Bureau of Vocational Education Competency Based Programs Capital Plaza Tower Frankfort, KY
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Lyons, Bonnie Ms.	Home Economics Teacher, Danville High School, Danville, KY
Roberts, Dr. Mary	Professor, Department of Special Education and Rehabilitation, EKU
Stewart, Jean Ms.	Home Economics Teacher, Berea Community School, Berea, KY
Stratton, Donnalie Ms.	Bureau of Vocational Education, Capital Plaza Tower, Frankfort, KY

Check one

☐ *Vocational Educator* ☐ *Special Educator*

PROFESSIONAL TASK ANALYSIS QUESTIONNAIRE

Directions: *Listed below are several professional tasks which you, as a vocational or special educator, are likely to perform in working with special needs learners at the junior and senior high school level. Please respond by circling one number for each of the three questions for each task.*

		Relative Time Spent *What is the relative amount of time you spend conducting this task?* Very little time ... A great deal of time							Criticality *How critical is successful performance of this task to the overall effectiveness of your program?* Unimportant ... Important ... Extremely critical					Area of Need *As a local educator working with special needs students, do I feel I need to know more about this task?* No ... Yes, a bit more ... Yes, much more				
1.00	ASSESSING PROGRAM AND LEARNER NEEDS																	
1.01	Develop a rationale, program goals, and philosophy for a special needs program	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.02	Analyze local or regional job market and employment trends	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.03	Identify occupations and clusters of occupations	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.04	Analyze students' occupational interests and aptitudes	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.05	Develop and use screening-referral processes for identification of students	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.06	Collaborate with other educators, specialists, and parents in evaluating the learner's educational needs	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
1.07	Administer or use diagnostic assessment techniques	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.00	PLANNING INSTRUCTION																	
2.01	Establish and/or use program advisory committees	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.02	Identify a variety of community and governmental agency resources in planning instructional programs and services	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.03	Analyze occupational/career clusters to determine relevant instructional content (competencies needed in the world of work)	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.04	Identify the basic aptitudes and competencies (e.g., finger dexterity or sequencing skills) required for employment in a given career	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.05	Collect and use available assessment information	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.06	Identify available assessment instruments appropriate for special needs students	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.07	Use diagnostic and prescriptive assessment techniques for planning instruction	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.08	Prepare alternative assessment procedures	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.09	Plan a sequence of modules or units of instruction according to the learner's needs	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
2.10	Coordinate with instructional planning in academic areas for students with learning problems (reading, math, and other academic areas required for graduation)	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5

		Relative Time Spent *What is the relative amount of time you spend conducting this task?* Very little time … A great deal of time	Criticality *How critical is successful performance of this task to the overall effectiveness of your program?* Unimportant … Important … Extremely critical	Area of Need *As a local educator working with special needs students, do I feel I need to know more about this task?* No … Yes, a bit more … Yes, much more
2.11	Develop individual student performance goals and objectives	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
2.12	Identify instructional resource personnel (e.g., reading specialists and bilinguists) capable of providing supportive help for special needs learners	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
2.13	Identify instructional techniques appropriate for special needs learners	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.00	IMPLEMENTING INSTRUCTION			
3.01	Use a variety of community and governmental agency resources in the delivery of supportive services and instruction	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.02	Consult with other teachers to facilitate adequate performance of students in classes outside of the career-oriented special program	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.03	Develop, itilize, and evaluate procedures for communicating with parents	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.04	Develop, coordinate, and evaluate a community relations program	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.05	Manage and modify when necessary the tools, equipment, facilities, or conditions in the learning environment	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.06	Organize and use a "buddy system" for special needs learners	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.07	Develop, use, and evaluate job samples designed to teach specific occupational skills	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.08	Develop and use simulated job application and interview procedures	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.09	Select or modify instructional materials appropriate for different special needs learners	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.10	Develop instructional materials for special needs learners	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.11	Plan and coordinate off-campus work (on-the-job) instruction	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.12	Plan and coordinate on-campus work (on-the-job) instruction	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.13	Use instructional techniques that individualize instruction (e.g., peer instruction, small group instruction, or programmed instruction)	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5
3.14	Employ techniques or principles of special instruction (e.g., discrimination learning or cue redundancy)	1 2 3 4 5 6 7	1 2 3 4 5	1 2 3 4 5

		Relative Time Spent *What is the relative amount of time you spend conducting this task?* Very little time						A great deal of time	Criticality *How critical is successful performance of this task to the overall effectiveness of your program?* Unimportant				Extremely critical	Area of Need *As a local educator working with special needs students, do I feel I need to know more about this task?* No				Yes, much more
3.15	Identify and control problem behaviors in the classroom using behavioral management techniques	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.16	Provide reinforcement for learning	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.17	Provide career counseling and guidance	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.18	Provide work adjustment counseling	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.19	Provide personal counseling	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.20	Provide and/or coordinate job placement services for special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
3.21	Train employers and supervisors to work effectively with special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.00	EVALUATING PROGRAM AND INSTRUCTION																	
4.01	Develop instruments and procedures appropriate for assessing the achievement of special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.02	Design and implement a system for monitoring and feeding back student progress and achievement on a regular basis	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.03	Assess the cognitive performance of special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.04	Assess the affective performance of special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.05	Assess the psychomotor/perceptual performance of special needs learners	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.06	Obtain follow-up information on special needs students leaving or graduating from school programs	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.07	Evaluate and upgrade the effectiveness of instruction	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5
4.08	Conduct a comprehensive evaluation of the total special needs program	1	2	3	4	5	6	7	1	2	3	4	5	1	2	3	4	5

Attitude Toward Handicapped Individuals Scale

by

Al Lazar

Mark each statement in the left margin according to how much you agree or disagree with it. Please mark every one. Write +1, +2, +3; or -1, -2, -3; depending on how you feel in each case.

+3:	I AGREE VERY MUCH	-1:	I DISAGREE A LITTLE
+2:	I AGREE PRETTY MUCH	-2:	I DISAGREE PRETTY MUCH
+1:	I AGREE VERY LITTLE	-3:	I DISAGREE VERY MUCH

_____1. Parents of handicapped children should be less strict than other parents.

_____2. Handicapped persons are just as intelligent as non-handicapped ones.

_____3. Handicapped people are usually easier to get along with than other people.

_____4. Most handicapped people feel sorry for themselves.

_____5. Handicapped people are the same as anyone else.

_____6. There shouldn't be special schools for handicapped children.

_____7. It would be best for handicapped persons to live and work in special communities.

_____8. It is up to the government to take care of handicapped persons.

_____9. Most handicapped people worry a great deal.

_____10. Handicapped people should not be expected to meet the same standards as non- handicapped.

_____11. Handicapped people are as happy as non-handicapped people.

_____12. Severely handicapped people are no harder to get along with than those with minor handicaps.

_____13. It is almost impossible for a handicapped person to lead a normal life.

_____14. You should not expect too much from handicapped people.

_____15. Handicapped people tend to keep to themselves much of the time.

_____16. Handicapped people are more easily upset than non-handicapped people.

_____17. Handicapped persons cannot have a normal social life.

APPENDIX B

CALENDAR

WORKSHOP FOR OCCUPATIONAL HOME ECONOMICS TEACHERS
ON WORKING WITH STUDENTS WITH SPECIAL NEEDS

Summer 1977

Monday, July 18		Welcome and Introductions
		Film: Path to Fulfillment
		Distribute Calendars
		Overview of Workshop
		Registration
		Questionnaires
		Breaking Down Barriers/Increasing Awareness
		Tomorrow: Directions to Thelma and Car Pooling
Tuesday, July 19	8:30	Depart for Thelma
	12:00	Lunch at EKCRC
	1:00	Tour of Center
	2:00 - 4:00	General Introduction - Linda Nichols
Wednesday, July 20	8:30 - 9:30	What is a Disability? - Linda Nichols
		What is a Handicap? - Linda Nichols
		Causes and Types - Linda Omer
	9:30 - 10:30	Medication - Linda Young

	Public Law 94-142 - Cascade System Due Process, IWP's
	Module Outline and Sample Modules
	Assignments for the Week
Tuesday, July 26	Lesson Plan/Discuss Module Development
	1.0 Introduction
	2.0 Pre-Assessment
	3.0 Objectives--Behaviorially Written
	4.0 Task Analysis
Wednesday, July 27	Module Development (continued)
	5.0 Long and Short Term Objectives
	6.0 Learning Activities - VAKT Learning Materials
Thursday, July 28	Complete Module Development
	7.0 Post Assessment
	8.0 Remedial Activities
	Behavior Modification/Contingency Management
Friday, July 29	Visit Cardinal Hill - Lexington
Monday, August 1	Completed Lesson Plans/Modules
	Discuss and Finalize

		Special Equipment - Linda Young Linda Omer Alice Dugan W. L. Walters D. Howard
	10:30 - 10:45	Break
	10:45 - 12:00	Special Classroom Equipment - Debbie Sanglier Janee Owen
	1:00 - 2:00	Psychological and Social Effects - Linda Nichols
	2:00 - 4:00	Meeting with Jim Williams, Supervisor of Training and Instructors
	4:00 - 4:30	Social to Meet with Students
	7:00 - 7:30	Counseling - Tim Howard and Mike Adams
	7:30	Argus Ferguson - Recreation
Thursday, July 21	8:00 - 2:00	Assume Disabilities and Follow Schedule of the Students
	2:00	Return to Richmond
Friday, July 22		Discuss Thelma Experience
		Library: Reference Room 9:30 Documents Room 10:40
Monday, July 25		Determine Group Needs Other Than Those Listed
		Learning Resource Center - Library

		Directions and Car Pooling for Thelma
Tuesday, August 2	1:00	Arrive at the Center and Meet with Instructors to Finalize Lesson Plans
Wednesday, August 3	8:00	Arrive at Center - Go to Work Station
	8:30 - 12:00	Teach Unit
	12:00 - 1:00	Lunch
	1:00 - 2:30	Round Up, Discussion with Students
Thursday, August 4		Discuss Thelma Experience
		Catch-up on Omissions
Friday, August 5		Workshop Evaluation
		Individual and Group

APPENDIX C

HEC 550
Summer 1977

SUGGESTIONS FOR USING TOKEN ECONOMY

by Alfred L. Lazar and Robert Stodden

The quest for competency in teaching has resulted in the growing development of and experimentation with numerous innovative techniques for learning enhancement and management of student classroom behavior. Token economy and behavior analysis, originating in the field of behavioral psychology, particularly from the research of B. F. Skinner, are part of this new effort. The purpose of this article is to provide the teacher of the mentally retarded and educationally handicapped with a description of the use of behavior analysis in the special classroom.

Behavior analysis follows a systematic pattern of observation while still allowing for flexibility. It is based upon the basic principles of human learning that have been known and understood for some time by researchers in child development and learning theory. During the past several years, growing corrective action has been taken by teachers to use this knowledge in the classroom.

What is behavior analysis? It is essentially a systematic and reliable method for analyzing a pupil's particular behavior, so that it can be changed to a more appropriate behavior. Such a change is desired so that a more efficient and effective learning situation will develop. Most importantly, this method requires that the special class teacher focus attention upon the pupil's responses. Behavior is observed, measured by determining response rates over a period of time, and recorded so that frequency and tune relationships can be determined. Coding of this behavior can be assisted by using graphic or chart paper.

Task one:

The first task of the teacher is to collect baseline data concerning a specific child and a specific behavior. The operant level, or frequency of occurrence, of the specific behavior prior to the deliberate application of any consequences is called baseline data.

In the case of academic skills related to reading or arithmetic, the baseline data can be obtained through the use of formal and informal diagnostic instruments administered by the teacher. Scores will tell to some degree how much the pupil already knows about the skills the teacher wants to teach. In addition to the testing, the teacher is

road and weather conditions. To do multiple-column addition or subtraction, one must be able to borrow and carry as pempetency functions.

Objectives: Competencies can be broken down further into the smallest elements--objectives. They are atomic in nature. Once again, task analysis is used to reduce a given competency from its molecular structure to its atomic particles. This is illustrated by breaking down the competency of ball passing in basketball into one-handed pass, two-handed pass, overhanded pass, and underhanded pass. Each of these could involve further reduction to position of hands on the ball, coordination with the rest of the body, situation in relations to other players, both teammates and opposition. These finite particles are shaped to meet the unique learning characteristics of the student in terms of rate of learning, size of bite for learning tasks, proper modality input, type of reinforcement provided, and schedules of reinforcement.

It is important to point out that these three concepts have a definite meaning and interrelationship with one another. They are not used with interchangeable meaning as some other writers have used them.

Task three:

The third task of the special class teacher is to determine what kinds of reinforcers will be used in rewarding the appropriate behavior. Behavior analysis assumes that "extrinsic motivation" does not just happen but is caught through the use of a token economy system. Token economy is based upon the assumption that timely rewards can and will shape the behavior of the pupil to achieve the objective desired. Objectives are chained in a sequential fashion to achieve the desired competency, which in turn leads to the attainment of the instructional goal.

What is the difference between token economy and social reinforcers, like smiles or praise? Basically, smiles and praise can be given immediately following a child's behavior and should reinforce and strengthen the behavior. Social reinforcers should be used in a consistent and discriminative manner by all effective teachers. Token economy is a different type of reinforcement technique in that it allows the child to delay immediate gratification. It is a future-oriented reinforcer. The child learns that different tokens have different point values and that they must be accumulated to attain a certain value before they can be cashed in for a prize.

Tokens, to be effective, must be timed properly and must be delivered frequently. They can be awarded for varying sizes of learning tasks or to control rate and degree of desired behavior under prescribed conditions.

making assessment through close observation of the pupil during the administration of the task. If change of behavior in terms of class conduct is the chief concern, observing and counting the occurrence of a specific behavior would be the procedure. In conclusion, precision of definition of the behavior to be measured and the measurement of its occurrence are fundamental to this first teacher task.

Task two:

The second task of the special class teacher would be to define instructional goals. These broad-based instructional goals must be translated into specific behavior competencies. Finally, task analysis is made of each competency, reducing the learning situation to specific learning objectives that are measurable in behavioral terms.

Thus, the teacher might have several students working toward the development of the same specific competency, i.e. carrying in addition, but the basic difference would be in the number of objectives needed by each student to master the given competency. Not only would the pupils differ in the number of specific learning objectives, but special consideration would be given to their rate of learning, modality of input, reinforcers used, and practice required for mastery. These become the fundamental factors of individualized instruction. Different students will require a different number and type of specific objectives to develop a specific competency in time and space.

It might be appropriate to define operationally how we, the authors, define the three critical concepts: goal, competency, and objective. This is important because they have so many different meanings in the literature. For the purpose of this article, they are defined as follows:

Goals: These are complex human behaviors. Two or more competencies are required to perform a molar act as judged from a developmental learning theory viewpoint. Examples include playing basketball, driving an automobile, or giving a lecture regarding the political, social, and economic causes of the Civil War.

Competencies: These are specific skills and knowledge that normally must be mastered in a developmental sequence to achieve a given goal. They are molecular in nature and are thus capable of being reduced to objectives via task analysis to meet the specific needs of all learners. Examples include shootin a ball, passing a ball, dribbling a ball, blocking for a partner, offensive and defensive plays. In driving a car, one needs to know about auto operations and safety, maintenance, shifting gears, braking under different conditions,

A key point in token economy concerns the constantly changing value of tokens. These values must change as the student further progresses in the desired direction.

Task four:

The fourth and final task involves some major rules for behavior analysis that need to be understood by the special class teacher:

1. Use positive and systematic reinforcement.
2. The child's behavior should be reinforced immediately and enthusiastically.
3. Use a combination of social and token reinforcers.
4. Make certain that the student understands the procedures of the token economy system in terms of values, delayed gratification, time and means of conversion, and prize to be earned.
5. Vary the values, times, and criteria for prizes or free time activities as changes occur.
6. Provide as many activities or prize options for the student as realistically possible.
7. Never take tokens away as punishment. Use them only in a positive manner.
8. Make the token economy system for your room fun and exciting.
9. Explain to the parents the purpose and value of your token economy system.
10. Coordinate with the building principal or immediate supervisor for necessary funding of your token economy.
11. In cases where the child is integrated into other parts of the school program, the special class teacher might coordinate a team teaching token economy so that the child can be rewarded by several significant adults under different situations.
12. Learn to ignore inappropriate student behavior. Reinforce only that which you desire.
13. Start each day fresh with the issuance of new tokens. Collect them at the end of the day and record the points they represent through a written record system.
14. Eventually attempt to shift students from a token economy system to one basically using social reinforcement.

In summary, this article covered four basic tasks for the teacher to consider in planning and developing a token economy system along with behavior analysis. The relationship and definitions of three concepts--goal, comptetency, and objective--were provided. Token economy is only one of many methods that can be used to enhance student learning, but

it is one that is frequently used because of limited understanding by the special class teacher. It should be a part of every teacher's capability for classroom management and control.

Some suggested readings:

Ayllon, T., and Azrin, N. The Token Economy: A Motivational System for Therapy and Rehabilitation. Meredith Corporation: N. Y. 1968.

Gardner, W. I., Behavior Modification in Mental Retardation. Aldine: N. Y. 1971.

Neigworth, J. and Smith, R. Modifying Retarded Behavior. Houghton Mifflin Company: Boston, 1973.

Thompson, T and Grabowski, J., Behavior Modification of the Mentally Retarded. Oxford University Press: London, 1972.

Reprint: Lazar, Alfred and Stodden, Robert. "Suggestions for Using Token Economy," The Pointer: 19 (2) 154-156, (Winter) 1974.

HEC 550
Summer 1977

AXIOMS ON SPECIAL EDUCATION

1. Each exceptional child is primarily a child with the same rights to acceptance, understanding, and education as other children.

2. Wide individual differences exist among children in each area of exceptionality.

3. Early screening, identification, and placement in a special education program are generally necessary if exceptional children are to make optimal progress in school.

4. The team approach to comprehensive case study involves medical, social, and psychological, as well as educational specialists, but educational diagnosis and placement are central responsibilities of the education authority in charge.

5. The success of a particular type of special education service will depend on well developed criteria for placement so that pupils with other types of problems and needs are not inappropriately enrolled in it.

6. Programs should not be initiated or continued unless well-trained, competent personnel are available.

7. Specialized curriculum, materials and equipment are needed, though the quantity and type will vary from area to area.

8. Since the general objective of "developing personal, social, and economic effectiveness" is too broad to permit careful curriculum development or appraisal of teaching and learning effectiveness, specific goals need to be developed for all special education programs with an emphasis on both scholastic and social learning, on the national purposes of education, and on the aptitudes and potentials of the pupils concerned.

9. A mental health approach in terms of accepting each pupil and providing a warm classroom climate is a profitable entree for assisting a student to self acceptance, self evaluation, and the development of realistic goals.

10. Clinical-education instruction is needed for exceptional children which involves individualized teaching procedures based upon careful appraisal of each pupil's abilities and disabilities.

11. Education for exceptional children should be an integral part of a total education program when possible and practical.

12. Continuous re-assessment of exceptional children and re-evaluation of school programs are essential to progress.

13. Follow-up of each student after he leaves school, and placement assistance where needed, are responsibilities of the school.

14. Community-wide cooperation among educational and noneducational services for exceptional children will broaden the comprehensiveness and avoid gaps and duplications.

15. Special education programs are strengthened by frequent interpretation of them to educators, parents, legislators, and the public.

16. The promotion of educational research, teacher preparation, and instructional services in education for exceptional children are the joint responsibilities of national, state, and local agencies.

CHARACTERISTICS OF AND TEACHING TECHNIQUES
FOR THE EDUCABLE MENTALLY RETARDED

Tendencies and Characteristics: An objective observation of our slow and retarded learners seems to indicate that many of the following characteristics seem to be in evidence. They may exist singularly or in slusters, and tend to multiply as the youth becomes more deviated from the norm.

1. As a group they tend to be rather clumsy, lack coordination, have evidence of speech defects, are often defective in sensory areas such as sight and hearing, and in general are less physically sound. This poorer physical condition affects the brain, the seat of learning. They are usually well represented at the health clinic and subject to colds, sore throats, contagious diseases, infections, and allergies. These conditions tend to make them miss school and present obstacles to efficient learning, study, and recitation situations.

2. They tend to lack control of their emotions, often feel inferior and defeated, and at times become aggressive physically, boast and misrepresent past experiences; sometimes are defiant, and seek excuses of all types. This is a natural result of their lack of ability and lack of success in normal school situations.

3. They resist most types of homework and study because there are too many other forms of activity which are more satisfying. One can sense success in watching television, movies, going to peer group dances, or spending time over the coke bottle. Whether teachers like this situation or not, it is a true situation. Probably nothing that the teacher can do will change it to any measurable extent. There are arguments in favor of not changing it. For this reason much of their achievement must occur within the classroom.

4. They lack the ability to evaluate their own actions to any great extent, have difficulty reasoning, and do not contemplate results before they occur except in very simple situations. Because of these tendencies, group and individual self evaluation must be very specific, objective, and written down. Directions must be noted individually, repeatedly, and emphasized emphatically.

5. They lack the ability to generalize and summarize except in vague terms. The teacher must be satisfied with simple explanations most of which are obvious results of simple observation.

6. They lack ingenuity and imagination. This is due to weakened brain structure and an apparent lack of ability to associate ideas which are involved in abstract thinking. Therefore teaching must involve as many concrete experiences and demonstrations as possible without too much attention to the scientific explanations of causation. Again directions must be simple, direct, and follow a step by step procedure.

7. They lack ability to define. Therefore the teacher must expect descriptions and examples, rather than definitions. This makes it very difficult to apply rules to solve problems. It makes it necessary to use audio visual aids, laboratory experiences, and simple demonstrations all of which accept the observable.

8. They lack any great degree of ability to concentrate and can not give undivided attention for very long periods of time. This makes it necessary for the teacher to break the class period into small units of presentation and recitation. Their span of attention is comparable to that of a fourth grader in junior high, or a fifth grader in senior high. When attention lags, the teacher must move on to something else--closely related, yet involving new features and interests. Then, when attention lags again, she can return to the first situation. She must be careful not to present more than two or three of these in one class period.

9. They lack retention power. For this reason the teacher must review the preceding lesson, dress what has already been covered up in new interest, close and repeat the basic principle, and move very slowly. (Slow learners not only need simple presentations but they must have smaller units of assignments, and must not be expected to cover the same amount of material in a day, week, or month as the normal student.) It is much better to teach less and have the student acquire some of it than to teach much and have him become hopelessly confused.

10. He tends to have defective auditory memory. Because of this fact the teacher must combine several sense perceptions, or sensory stimuli at the same moment. This reinforcement seems to result in more lasting impressions as well as clearer concepts. Combine the eye, ear, and hand stimuli whenever possible.

11. He tends to become emotionally tense and fearful in a learning situation. This is the natural result of several years of failure. Therefore, the emotional climate of the school room is extremely important. A child can not learn when he is mentally blocked by fear and depression. This makes it paramount that the child senses that the teacher likes him, respects him, accepts him, has confidence in his ability to learn and respond. The curriculum must be adjusted so that it contains facts and understandings that he can acquire with some degree of success. Grades must be minimized, yet retained. Completion is very important and must be obvious to the student. He must see some degree of achievement, even though it is very small. Individual progress graphs, achievement sheets, and completion check sheets can take the place of too many grades.

12. He lacks verbal ability in the area of reading and vocabulary. This serves as a basic cause for failure and is probably the most important area of all. For this reason all teachers, in all subjects must stress basic reading. If the teacher is not trained as a reading teacher, she must do all that she can to become more efficient. The basic grammar that is used with college preparatory students should give room for the substitution of reading and functional sentences and vocabulary study. All teachers of these students should be aware of the grade reading achievement level of the individuals and the curriculum must be adjusted in context materials of books, instructions, blackboard materials, worksheets, and supplementary reading materials so that the child can understand what the printed page is saying. This is a huge task. Time for such an adjustment must be provided for all teachers involved.

13. He lacks ability to note detail. Because this is true, the teacher must indicate important detail by calling his attention to it. Yet she must sense that point at which detail is becoming confusing. This is true in science and mathematics because both of these subjects contain a great deal of detail which is extremely important to an understanding and competency in skill performance. There are many devices for calling attention to important and pertinent detail such as the use of colored chalk in accenting detail within the computation in mathematics, or in diagrams of science demonstrations placed on the board, or on study sheets.

14. He usually has slow reaction time. Don't let better students supply all the answers. This takes patience, prodding at the right moment, repetition, the right amount of help, and the extension of completion time element. The teacher often has to watch him think, if that can

be done and come to his rescue only when progress in his thinking bogs down. Then the same thinking process must be repeated in due time with less assistance, until he is able to perform either physically or mentally without aid. This individual attention means smaller classes and means that the teacher's job is made much more difficult because she must move from student to student to offer individual guidance.

15. He usually has difficulty in following a logical sequence of events. This expresses itself differently in the various class situations. For instance it is quite different in English than it is in science, or in mathematics. Yet it is very important to mastery and success in skill development procedures. Step by step instruction helps, outlines are useful when applied, verbal explanations by the student of a performance or story aids, routine movements in class situations give confidence, reaccounting of movies gives opportunity, but they develop more skill in this area only by repeated efforts in real situations. He probably will never become very skilled in the talent except in situations involving the same identical performance over and over again.

16. The incidence of personality maladjustments are great. If the difficulty is not too great the teacher can help if she will take time to visit with the youth, give suggestions, and provide situations in which he can experience the proper amount of successful achievement academically and socially. However in the more severe maladjustments a good guidance individual who is trained in his field, and who will provide opportunity for personal interviews, and individual guidance can do a great deal to help the student adjust. In such situations the guidance specialist and the teacher should work together.

17. He lacks ability in the area of inference. As this is probably the most complex of all mental processes, situations that involve inference should be kept at a minimum. The teacher should not expect him to infer or imagine new situations, especially if this involves abstract thinking. In an experimental situation where he can learn by trail and error and observe the results of his simple planning, he can see what happens and by looking back at results can substitute, to some extent, for his deficiency. This also tends to give him a very local point of view. This is extremely important to the teacher. It means that she must use situations out of the local environment of the neighborhood, home, school, town, etc., for science, history, mathematics, and functional English. Not only can he witness the situation but he tends to think it is of importance.

18. We have indicated that he needs attention to physical needs. These needs are both developmental and remedial in nature. Physical education classes can be adjusted to his needs in many ways. It can serve as a body builder, opportunity for release of physical energy, relief period from mental effort, opportunity for exercise to remove the poisons from the system which retard learning, place where he can receive attention to injuries, take showers and learn the value of cleanliness, develop hobbies, learn good sportsmanship, feel achievement and success, and learn the give and take of competition. This opportunity should be reinforced by attention to needs such as glasses and hearing aids, proper dress and stance, eye-hand coordination, grace and functional body balance, etc.

SUGGESTIONS FOR TEACHING OR HANDLING SLOW LEARNERS

1. Know your student
2. Make a friend of him
3. Maintain a standard adjusted to his level, but is demanding and a challenge for him
4. Don't think of him as a future college student
5. Be aware of his strengths and needs
6. Study his own peculiarities in his learning process
7. Set reasonable and practical levels of achievement
8. Build his interest around his own chronological age
9. Make most of his experiences successful ones
10. Provide for progress that he can sense and see
11. Make constant diagnostic tests to find the child's weaknesses
12. Praise him when you sincerely can
13. Don't push him beyond the limit of ability
14. Use simple ideas (concrete) and materials
15. Don't -ry to stick to a textbook program
16. Provide opportunity for him to use as many senses as possible simultaneously
17. Try to keep him busy and interested
18. Remember a trade school is not necessarily effective
19. Emphasize the basic skills

20. Emphasize practical science in his everyday environment

21. Use many audio visual aids

22. Apply spelling, sentence sense, and penmanship all the time

GLOSSARY OF TERMS

Public Law 94-142. The Education for all Handicapped Children Act, signed into law by President Ford on November 28, 1975, is designed to assure that all handicapped children have available to them a free, appropriate public education which emphasizes special education and related services designed to meet their unique needs, to assure that children and parents' rights are protected, to assist states and localities and to assure effectiveness of efforts.

Procedural Safeguards. Specific procedures designed by law to protect the rights of children and parents. These safeguards include:

a. Due process - The right of the parent and child to be fully informed and included in decision-making at all steps in identification, child evaluation, planning, programming, and program evaluation.

b. Nondiscrimination - The assurance that special education placement will not be provided on the basis of biased or discriminatory information.

c. Least restrictive environment - A wide number of options favoring the educational environment which is closest to general education placement.

d. Native language - The language spoken in the home.

e. Confidentiality - The right of parents and children to have access to and control of all educational records, relative evaluation data, and assurance that any information contained in school records will not be released without the permission of the parent.

Placement Committee. A committee which bears the responsibility for decisions regarding the evaluation, remediation and placement of children referred for special education. The term "admissions and release" committee is synonymous with "placement committee", "child study team", etc. Kentucky has two (2) types of admissions and release committees:

(1) The School-Based Admissions and Release Committee (SBARC)

(2) The Administrative Admissions and Release Committee (AARC)

School-Based Admissions and Release Committee (SBARC). This type of committee, whose only permanent member is the principal, or his designee, is responsible for decisions made on referred children who are already in school.

Administrative Admissions and Release Committee (AARC). This type of committee has two permanent members, the local school district superintendent and the director of special education for the local school district. This committee's responsibilities are to children who are not currently enrolled in a school or who are referred from the School-Based Admissions and Release Committee (ABARC).

Core Committee. This term refers to those persons who constitute the minimum personnel on admissions and release committees. It is usually composed of (1) the referring and/or receiving teacher(s), (2) the administrator(s) and (3) the evaluator(s). The core committee will identify other persons who can facilitate appropriate evaluation remediation and placement decisions regarding the referred child. The parents may participate, according to their wishes, as part of the core committee or as part of the total committee.

Total Committee. The membership of the total committee is composed of the core committee and any other persons who can provide information and/or skills which will facilitate appropriate evaluation, remediation and placement decisions. The membership of the total committee may change from meeting to meeting depending on the kinds of information and/or skills needed.

Individual Education Program (IEP). A written statement, developed by the Admissions and Release Committee translating child evaluation information into practical planning. According to P.L. 94-142, the contents of the IEP, related to a particular handicapped child, are as follows:

1. present level of educational performance;
2. annual goals and short-term objectives;
3. specific educational services to be provided;
4. extent to which child will participate in regular classroom;
5. projected date for initiation and duration of services;
6. objective criteria and evaluation procedures; and
7. schedule and procedures for review (must be at least annually).

SOME CHARACTERISTICS OF INDIVIDUALS WITH MENTAL RETARDATION

1. Apathy
2. Impulsiveness--lack of behavior control, hyperactivity
3. Emotional instability--irritability, fluctuation of mood
4. Distractibility
5. Low stamina--fatigued easily
6. Motor disabilities--spasticity, palsy, crippling
7. Over-dependence upon others
8. Lack of curiosity
9. Sensory impairment--defective sight, hearing, etc.
10. Disorders of perceptions--short attention span, figure-ground confusion, attention to irrelevant features.
11. Disorders in concept formation--lowered reasoning ability
12. Language disorders--speech difficulties, extremely limited vocabulary
13. Social incompetence--difficulty relating to others, lack of social amenities

Characteristics of Educable Mental Retardation

Intellectually they have:

1. a limited capacity to learn
2. academic achievement ranging from third through sixth grade at the age of eighteen
3. difficulty in engaging in abstract thinking
4. difficulty in handling symbols associated with reading, writing, and arithmetic
5. a reduced ability to see relationships between cause and effect
6. simple and superficial understandings rather than understandings which are characterized by complexity and depth
7. limited ability to solve problems
8. difficulty in generalizing and transferring knowledge
9. trouble in expressing thoughts verbally and in writing
10. reduced ability to profit from incidental learning

Emotionally they:

11. frequently have depreciated self-concepts
12. frequently do not recognize their strengths and weaknesses in the performance of tasks, in solving problems, or in getting along with others
13. often are immature

Socially they:

14. often use inappropriate means of adjustment
15. frequently come from underprivileged neighborhoods and homes
16. often have difficulty in forming friendships with their peers
17. have some difficulty in participating, understanding, and meeting everyday situations
18. often have difficulty in following and practicing certain common customs and amenities
19. tend to come from families which change residence frequently
20. often have reduced experiences upon which to base academic learning

Physically they:

21. have a high incidence of handicaps
22. often have inferior motor co-ordination

23. have a high percentage of speech defects
24. have a high incidence of anomalies which detract from appearance

In addition, they:

25. generally have had poor experiences in school
26. frequently have experienced failure in school
27. often have adjustment problems in school
28. often come from families who do not place a high value on education

Teaching Principles and Practices for Teachers
of Children with Mental Retardation

1. A high level of stimulation must be provided. This should include the kind and variety of stimulation which will arouse interest in the child and will necessitate his responding to the stimulation.

2. Provide the highly distractible child with inconspicuous, calm direction. If necessary, such a child may be separated from the group temporarily, not as punishment but as a means to reduce the number of distractions.

3. Require that children make decisions in many situations. These should not be dangerous situations or situations in which it is difficult to make decisions, but the child frequently must be forced into making simple decisions in the course of ordinary activities.

4. Provide many situations in which the child must differentiate, compare, and match various items, that is, situations in which these operations convey to the learner the correctness or incorrectness of his response.

5. Rote learning should, when possible, be avoided in favor of integrating new tasks with previous knowledge or skills. Since this is not always possible, rote learning may be sometimes acceptable.

6. Expose the child to events which will help him to perceive causality, particularly to perceive the effects his own actions have upon various events and objects.

7. Increase the demands made on the child as improvement occurs.

8. Maintain an understanding, strict discipline. Gradual efforts should be made to encourage self-discipling.

9. Give rewards freely and promptly for good performances only. Ordinarily, rewards in the form of general verbal praise are sufficient.

10. Devise tasks which are appropriate to each child's mental and physical ability. This may require, at times, use of special aids, or aids, or again, starting a task at a simplified level.

11. A child's physical disabilities, as well as his mental deficiencies, must be worked with. Special exercises, helpful in the case of physical disability, may also contribute to the child's confidence, as well as to the improvement of basic skills needed for mental development.

12. Alternate freely, with sensitivity to the condition of the child, periods of work, play, and rest.

13. Train the child to adjust to and interact with other children. It seems helpful to develop a "group spirit" or loyalty to other members of his class.

14. The children must be given many opportunities to express their needs for activity. With apathetic children, the teacher must create an increased need for activity.

15. Children should be exposed to many situations outside the school premises.

16. To eliminate undesirable behavior, attempt to substitute desirable habits.

17. Drill periods should be relatively short to avoid loss of attention and possible boredom.

18. Frequently, recreation periods should be used to apply the skills and knowledge being acquired in the classroom.

19. Remember that successful experiences, even the smallest achievements, are more helpful to learning than failure.

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CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Instruction
Bureau of Pupil Personnel and Special Educational Services
Hartford

GLOSSARY

Definitions of common medical terms in orthopedics, cardiology frequently encountered by non-medical personnel working with exceptional children.

The terms were selected with the advice of consultants in education, physical and occupational therapy and medicine. Standard definitions were revised and simplified by the medical consultants.

Syllabification of terms is based on the 22nd Edition of The American Illustrated Medical Dictionary by Dorland, published by W. B. Saunders Company, Philadelphia, Pa.

Terms are alphabetized by the first three letters.

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Acknowledgment is also made to the W. B. Saunders Company of Philadelphia for permission to employ the syllabification of terms based on the 22nd Edition of the American Illustrated Medical Dictionary by Dorland.

Although the glossary was prepared primarily for use in public school programs of education for physically handicapped, it has been of great assistance to private agencies who are concerned with problems of the physically handicapped as well as to institutions engaged in the preparations of nurses and teachers. Veterans Administration Hospitals and other agencies engaged in rehabilitation have fourn it equally useful.

Robert W. Stoughton, Chief
Bureau of Pupil Personnel and Special
Educational Services

abduction (ab-duk'shun)	The act of moving away from a center of middle point.
abductor (ab-duk'tor)	A muscle that abducts.
Achilles tendon (ah-kil'ez ten'dun)	Tendon connecting calf muscle to heel bone (calcaneus).
achondroplasia (ah-kon-dro-pal'ze-ah)	A disease of the skeleton beginning in fetal life and producing a form of dwarfism.
acquired	Not congenital but obtained after birth.
adduction (ah-duk'shun)	The act of moving toward a center.
adductor (ah-duk'tor)	A muscle that adducts.
adenoma (ad-e-no'mah)	A benign tumor with a gland structure.
albino (al-bi'no)	A person affected with abnormal whiteness of the skin, hair, and eyes. Lack of pigment.
alexia (ah-lek'se-ah)	Word blindness; inability to read due to a lesion in the brain.
ambidexterity (am'be-deks-ter'i-te)	The possession of manual skill in each hand, some acts being performed skillfully with one, some with the other.
amnesia (am-ne'se-ah)	Lack or loss of memory, especially inability to remember past experiences.
amyotonia congenita (ah-mi-o-to'ne-ah) (Oppenheim's Disease)	A rare congenital disease of children marked by general hypotonia* of the muscles.
anemia (ah-ne'me-ah)	Deficiency of blood in quantity or in quality.

ankylosis (ang-kil-o'sis)	Abnormal immobility and consolidation of a joint; frozen joint.
anomaly (ah-nom'ah-le)	Abnormal; marked deviation from the normal standards.
antibiotic (an'te-bi-ot'ik)	A therapeutic agent derived from plant life, such as penicillin, streptomycin and aureomycin.
aorta (a-or'tah)	The main trunk from which the entire systemic arterial system proceeds.
aphasia (ah-fa'ze-ah)	Defect or loss of the power of expression by speech, writing of signs, of comprehending spoken or written language.
aplasia (ah-pla'se-ah)	Incomplete or defective development of tissue. 2. Congenital atrophy.
aphonia (ah-fo'ne-ah)	Loss of voice.
arrhythmia (ah-rith'me-ah)	Disturbed rhythm of heart beat.
arthritis (ar-thri'tis)	Inflammation of a joint.
arthrodesis (ar-throd'e-sis)	The surgical fixation of a joint by fusion of the joint surfaces artificial ankylosis*.
arthrogryposis	Persistent flexure or contracture of a joint.
asphyxia (as-fix'se-ah)	Suffocation.
ataxia (ah-tak'se-ah)	A type of muscular incoordination characterized by lack of balance.
athetoid (ath'e-tiod)	Affected with athetosis*.
athetosis (ath-e-to'sis)	Involuntary movements of the head,

	body extremities or tongue. A subclassification of cerebral palsy.
atrophy (at'ro-fe)	A wasting away or diminution in size of a tissue, organ, or part.
atropine (at'ro-pin)	A drug which suppresses sweating and saliva; dilates the pupils and increases rate of heart beat.
audiogram (aw'de-o-gram)	A chart of the variations of the acuteness of hearing of an individual.
audiometer (aw-de-om'e-ter)	A device to test the power of hearing.
aura (aw'rah)	A peculiar sensation or phenomenon that precedes an epileptic attack.
Babinski reflex test (bah-bin'ske)	An abnormal reaction elicited by stroking or stimulating the sole of the foot. With a positive Babinski reaction the toes extend (especially the great toe) and spread. It occurs in lesions of certain motor tracts in the center nervous system.
basal metabolic rate (B.M.R.)	The minimal heat produced by an individual 14-18 hours after eating and at complete rest but not sleep. It represents the energy expended to maintain the vital processes of life (respiration, circulation, glandular action, etc.)
benign (be-nin)	Not malignant; not recurrent; favorable for recovery.
benzedrin (ben'ze-dren)	A drug which stimulates cerebral activity producing wakefulness and a feeling of well being and loss of appetite.
bilateral (bi-lat'er-al)	Having two sides, or pertaining to both sides.

brace	An appliance for support of a body part, to relieve weakness or to maintain alignment.
brachial birth palsy (bra'ke-al)	Paralysis or partial paralysis of the arm resulting from injury to the nerves at birth. It may affect the forearm, upper arm or whole arm.
Bradford frame	Rectangular frame of gas pipe to which is attached a heavy sheet of canvas; used as a bed frame in tuberculosis of the spine, and in fracture of the thigh to maintain position.
bursa (bur'sah)	A sac or sac-like cavity filled with a viscid fluid and situated at places in the tissues at which friction would otherwise develop.
calcaneus (kal-ka'ne-us)	The heel bone.
Callus (kal'us)	The plastic exudate oozed about the fragments of a broken bone and accomplishing the work of repair.
Calve Perthe's disease (Legge Perthes)	A disease characterized by softening and crumbling of the head of the femur that fits into hip socket.
carcinoma (kar-si-no'mah)	A cancer.
cardiac (kar'de-ak)	Pertaining to the heart. A person with an organic heart disorder.
cardiograph (kar'do-o-graph)	An instrument placed over the heart to indicate the force and form of the heart's movements.
cardiogram (kar'do-o-gram)	A tracing produced by means of the cardiograph.

cardiologist (kar-de-ol'o-jist)	A qualified practitioner who is especially trained in the study and treatment of heart diseases.
cardiotomy (kar-de-ot'o-me)	Incision of the heart.
cardiovascular (kar'de-o-vas'ku-lar)	Pertaining to the heart and blood vessels.
carditis (kar-ti'tis)	Inflamation of the heart.
cartilage (kar'ti-lij)	The gristle or white elastic substance attached to joint surfaces and forming certain parts of the skeleton.
cast (kast)	A rigid dressing made of bandage impregnated with plaster of paris or other hardening materials; used for immobilizing parts of the body.
central nervous system	All parts of the brain and spinal cord.
cerebellum (ser-e-bel'um)	A part of the brain behind and below the cerebrum* and occupying the back part of the skull. The cerebellum is concerned in balance or in the coordination of movement.
cerebral (ser'e-bral)	Pertaining to the cerebrum, a portion or division of the brain.
cerebral palsy (ser'e-bral pawl'ze)	Weakness or paralysis due to brain lesion. The term is applied to a group of disease in childhood marked by a paralysis or by disturbances of motion.
cerebrospinal (ser'e-bro-spi'nal)	Pertaining to the brain and spinal cord.

cerebrum (ser'e-brum)	The superior and the largest division of the brain, consisting of two hemispheres.
cervical (ser've-kal)	Pertaining to the neck.
Charcot Marie Tooth Disease (shar-ko mah-re' tooth)	Progressive neuropathic (peroneal) muscular atrophy.
Chorea (ko-re'ah) (St. Vitus Dance)	A nervous disorder with involuntary and irregular jerking movements; it is attended temporarily with irritability, emotional instability. It occurs in children and is often associated with rheumatic fever. This is known as Sydenham's chorea. There is a hereditary form of the disease, occuring primarily in adults which is called Huntington's chorea.
chronic (kron'ik)	Long continued; not acute.
clavicle (klav'e-k'l)	The collar bone.
clonus (klo'nus)	An abnormal jerking movement in the ankle, it may be induced by sudden pushing up on the foot while the leg is extended.
club foot	A bony deformity of the foot, either congenital or acquired in early life.
coccyx (kok'siks)	The small bone at the end of the spine.
coma (ko'mah)	A state of complete loss of consciousness from which the patient cannot be aroused even by the most powerful stimulation.
concave (kon'kav)	Presenting a depressed or hollow surface.

concussion (kon-kush'un) (of brain)	A condition caused by a violent blow upon the head attended with dizziness, nausea, loss of consciousness, weak pulse, and slow respiration.
congenital (kon-jen'i-tal)	Existing at or before birth.
contraction (kon-trak'shun)	A shortening, as of a muscle in the normal response to a nervous stimulus.
contracture (kon-trak'tur)	A shortening or distortion such as of muscle and scar tissue.
convulsion	Contractions of the body caused by violent involuntary muscular contraction of the extremities, trunk and head.
cortex (kor'teks)	The outer layer of substance of an organ as distinguished from its inner substance, as cerebral cortex.
coxa (kok'sah)	The hip or hip joint.
coxa plana (kok-san pla'na)	Flattening and broadening of the head of the femur occuring in Legg-Calve-Perthes* disease.
cranial nerves (kra'ne-ul nerv)	Twelve pairs of nerves given off by the brain.
cranium (kra'ne-um)	The skull.
cretin (kre'tin)	Person affected with cretinism*.
cretinism (kre'tin-izm)	A condition due to congenital lack of thyroid secretion. It is characterized by arrested physical and mental development
crutch palsy (crutch paralysis)	Paralysis of an arm or of the arms due to pressure of the crutch in the armpit.

cyanosis (si-ah-no'sis)	Blueness of the mucus membranes and sometimes in the skin due to insufficient oxygen in the blood as in a "blue baby" (congenital malformation of the heart and blood vessels).
cyst (sist)	A sac, especially one which contains a liquid or semi-solid.
degeneration (de-jen-er-a'shun)	Deterioration; change from a higher to a lower form.
diabetes mellitus (di-ah-be'tez melli'tus)	A metabolic disorder in which the ability to oxidize carbohydrates is more or less completely lost due to faulty pancreatic activity, especially of the islets of langerhans, and consequent disturbance of normal insulin mechanism.
diagnosis (di-ag-no'sis)	Identification of a disease from its symptoms.
diaphragm (di'ah-fram)	The muscle-membraneous partition that separates the abdomen from the thorax; one of the primary muscles of respiration.
diathermy (di'ah-ter-me)	The generation of heat in the body tissues due to the resistance offered by the tissues to high frequency electric currents forced through them.
diplegia (di-ple'je-ah)	Paralysis affecting like parts on both sides of the body; bilateral paralysis.
dorsal (dor'sal)	Pertaining to the back of a part.
dorsiflexion (dor-se-flek'shun)	Flexing or bending as of toes toward the dorsum*.

dursum (dor'sum)	The back, also any part corresponding to the back in position as of the foot, hand.
dyschondroplasis (dis'kon-dro-pla-ze-ah)	A condition of abnormal growth of cartilage with resultant deformity of the bony skeleton.
dyspnea (disp-ne'ah)	Shortness of breath with minimal exertion.
dysplasis (dis-pla'se-ah)	Abnormality of development.
dystrophy (dis'tro-fe)	Defective nutrition or development.
edema (e-de'mah)	Swelling due to accumulation or fluids in body tissues.
electrocardiogram (E.K.G.) (e-lek'tro-kar'de-o-gram)	A graphis tracing of the electric current produced by the contraction of the heart muscles.
electrocardiograph (e-lek'tro-kar'de-o-graph)	An instrument used in making an electrocardiogram*.
empyema (em-pi-e'mah)	Accumulation of pus in a cavity of the body especially in the chest.
encephalitis (en'sef'ah-li'tis)	Inflamation of the brain.
electro-encephalograph (EEG) (e-lek'tro-en'sef'ah-lo-graph)	An instrument for recording brain waves or electrical activity of the brain.
electro-encephalogram (EEG) (e-lek'tro-en-sef'ah-lo-gram)	A record of the brain waves.
endrocarditis (en'do-kar'di'tis)	Inflammation of the endocardium*; a disease generally associated with acute rheumatism.
endocardium (en-do-kar'de-um)	Innerlining membrane of the heart.

endocrine (en'do-krin)	Applied to organs whose function is to secrete into the blood or lymph a substance which plays an important role in matabolism; an internal secretion.
endocrinologist (en'do-krin-ol-o-jist)	A work in the subject of endocrinology or a physician who treats diseases arising from disordered internal secretions.
endothelium (en-do-the'le-um)	The layer of cells which lines the inner surface of the heart, blood vessels and other closed cavities.
epilepsy (ep'e-lep-se)	A chronic condition characterized by seizures of varying duration in which there is a loss of consciousness with or without a succession of convulsions.
epilepsy (petit mal)	A mild form in which dizziness or other sensations take the place of convulsions.
epilepsy (grand mal)	A seizure in which there are severe convulsions and loss of consciousness or coma.
epilepsy (jacksonian)	Epilepsy mainly limited to one side and often to one group of muscles.
epilepsy (psychomotor)	An epileptic equivalent in which the patient performs motor acts which he cannot remember having done.
epiphyseal arest (ep-e-fiz'e-al)	An operation designed to stop the growth of a bone at the epiphysis*.
epiphysis (e-pif'is-is)	A growing portion of bone separated from the main portion in early life

	by cartilage, but later becoming a part of the larger bone.
epiphysitis (e-pif'e-si-tis)	Inflammation of an epiphysis* or the cartilage which separates it from the main bone.
Erb's palsy	The upper arm (shoulder type of birth) palsy.
erythroblast (e-rith'ro-blast)	One of the nucleated cells of the type from which red blood corpuscles are developed.
erythroblastosis (e-rith'ro-blas-to'sis)	The presence of erythroblasts* or immature red blood corpuscles in the blood.
etiology (e-te-ol'o-je)	Knowledge regarding cause of a disease.
fascia (fash'd-ah)	A sheet or band of fibrous tissues which covers the body under the skin and encloses muscles and certain organs.
febrile (feb'ril)	Pertaining to fever; feverish.
femur (fe'mur)	The thigh bone.
fibula (fib'u-lah)	The outer and smaller of the two leg bones below the knee.
fibrosis (fi-bro'sis)	Formation of connective tissue.
fibroplasia (fi-bro-pla'se-ah)	The formation of fibrous tissue, as in the healing of wounds.
flaccid (flak'sid)	In muscle, lack of tone or weakness such as occurs in lesions of nerves.
flexion (flek'shun)	The art of being flexed, or condition of being bent.

flexor (flek'sor)	A muscle that flexes a joint.
foot drop (or) drop foot	A paralysis of the toes and part of the foot.
fracture (frak'tur)	The breaking of a part, especially of a bone. A break or rupture in a bone.
fragilitas ossium (frah-jil'e-tas os'sium)	A disease in which the bones are abnormally brittle and, therefore, subject to fractures following slight injury.
fragility (frah-jil'e-te)	Brittleness.
Friedreich's Disease	An inherited disease usually beginning in childhood or youth. It is characterized by ataxia*, speech impairment, curvature of spine, paralysis or muscles especially of the lower extremities.
functional murmur	(Also called physiological or accidental murmur) - a murmur of the heart found in 50% - 70% of growing children at some time during their years. This murmur is not associated with anything structurally wrong with the heart.
gait (gat)	The manner or style of walking.
ganglion (gang'le-on)	Collection or mass or nerve cells that swrve as a center of nervous control. Also, a sac which acts to lubricate tendons.
gastrocnemius (gas-trok-ne'me-us)	The muscle which extends the foot at the ankle and flexes the tibia* on the femur. (calf muscle)
Genu Recurvation (ge'nu)	Backward curvature of the knee joint.

Genu Valgum (ge'nu)	Inward curvature of the knee.
Genu Varum (ge'nu)	The outward curvature of the knee.
gland	An organ that produces a secretion.
gluteus maximus	That muscle which extends, abducts* and rotates the thigh outward. Commonly known as the buttock muscle.
hamstring	The muscles of the posterior aspect of the thigh which flex the knee and extend the hip.
heliotherapy (he'le-o-ther'ah-pe)	The treatment of a disease by exposing the body to the sun's rays produced artifically as by an ultra-violet lamp.
hemiplegia (hem-e-ple'je-ah)	Paralysis of one side of the body.
hemoglobin (he-mo-glo'bin)	The oxygen-carrying red pigment
hemophilia	A hereditary blood disease characterized by delayed clotting and consequent difficulty in checking hemorrhage. It is inherited by males through the mother.
hemophiliac (he-mo-fil'e-ak)	A person subject to hemeophilia*.
hepatitis (he -ah-ti'tis)	Inflammation of the liver.
hepatosis (hep-ah-to'tis)	An functional disorder of the liver.
Hodgkin's Disease	A painless, progressive and fatal enlargement of the lymph nodes* spleen and general lymphoid tissues, which often begins in the neck and spreads over the body.
humerus (hu'mer-us)	The bone between the shoulder and elbow.

hydrocephalus (hi-dro-sef'ah-lus)	A condition characterized by abnormal increase in the amount of cerebrospinal fluid and accompanied by dilatation of the cerebral* ventricles.* The disease causes enlargement of the head and prominence of forehead; it may produce atrophy of the brain, mental retardation and convulsions.
hydrotherapy (hi-dro-ther'ah-pe)	The use of water in treating disease.
hyperemia (hi-per-e'me-ah)	Excess of blood in any part of the body.
hypertension (hi-per-ten'shun)	Abnormally high tension, especially high blood pressure.
hyperthyroidism (hi-per-thi'roid-izm)	A condition due to excessive functional activity of the thyroid gland and characterized by increased basal metabolism.
hypertonia (hi-per-to'ne-ah)	Excessive tone, tension or activity.
hypertonic (hi-per-ton'ik)	Showing abnormally great tension.
hypertrophy (hi-per'tro-fe)	The abnormal enlargement or overgrowth of an organ or part.
hypotonia (hi-po-to'ne-ah)	Diminished tension; reduction in muscle tone.
idiocy (id'e-o-se)	Complete congenital inbecility; extreme mental deficiency.
idiopathic (id-e-o-path'ik)	Spontaneous or unknown origin.
ilium (ile-um)	The hip bone.
infantile paralysis	See poliomyelitis.

inflammation (in-flah-ma'shun)	The condition into which tissues enter as a reaction of irritation.
insulin (in'su-lin)	The internal secretion of the pancreas used in treating diabetes.
internist (in-ter'nist)	A physician who has had special training in diagnosis and care of internal disease.
jaundice (jawn'dis)	Yellowness of the eyes, skin, urine and sweat due to presence of bile pigments in the blood stream.
kyphosis (ki-fo'sis)	Humpback; abnormal curvature and dorsal* prominence of the vertebral column.
lacrimal gland (lak're-mal)	Tear gland.
Legg-Calve Perthes Disease	Osteochondrosis of capitular epiphysis of femur.
leukocyte (lu'ko-sit)	Any colorless, ameboid cell mass, such as white blood corpuscles.
luekemia (lu-ke'me-ah)	A fatal disease of the blood forming organs, characterized by a marked increase in the number of white blood cells in the blood and the presence of immature organs.
ligament (lig'ah-ment)	Any tough, fibrous band which connects bones or supports organs.
Little's Disease	Congenital spastic stiffness of the limbs, a form of cerebral spastic paralysis dating from birth and due to lack of development of the pyramidal tracts.
lordosis (lor-do'sis)	Curvature of the spinal column with a forward convexity.

lumbar (lum'bar)	Pertaining to the lower back.
lumbar spine	The part of the spine between the last rib and sacrum; it consists of 5 vertebra.
lymph nodes (limf nodes)	Gland like structures interposed throughout the lymphotic circulation.
macrocephalous (mak-ro-sef'ah-lus)	Having an excessively large head.
malformation (mal-for-ma'shun)	Defective or abnormal formation, deformity.
malignant (mah-lig'nant)	Virulent, and tending to go from bad to worse.
malnutrition (mal-nu-trish'un)	Imperfect assimilation and nutrition.
malocclusion	Such malposition of the teeth as will interfere with the highest efficiency during the excessive movements of the jaw which are essential to the function of mastication. (A.D.A.)
mandible (man'di-bl)	The horse shoe shaped bone forming the lower jaw.
maxilla (mak-sil'ah)	One of the two bones forming the upper jaw.
membrane (mem'bran)	A thin layer of tissue which covers a surface or divides a space or organ.
meninges (me-nin'jez)	The membranes that envelop the brain and spinal cord.
meningitis	Inflammation of one or more of the three membranes that envelop the brain and spinal cord.
meningocele (men-in'go-sel)	Hernial protusion of the meninges.

metabolism (me-tab'o-lizm)	The sum of the physical and chemical processes by which living organized substances are produced and maintained and also the transformation by which energy is made available for the uses of the organism.
microcephalus (mi-kre-sef'al-us)	Having a small head.
mononucleosis (mon'o-nu-kle-s'sis)	The presence of an abnormally large number of mononuclear leukocytes in the blood.
monoplegia (mon'o-ple'je-ah)	Paralysis of a single limb.
multiple sclerosis	A progressive disease of the central nervous system causing in young adults weakness, incoordination, spasticity and involuntary movements of the eyeballs.
myelitis (mi-el-i'tis)	Inflammation of the spinal cord.
myocarditis (mi'o-kar-di'tis)	Inflammation of the muscular walls of the heart.
myositis (mi-o-si'tis)	Inflammation of voluntary muscle.
myotonia (mi-o-to'ne-ah)	Increased muscle tone due to disease of the nervous system.
nephritis (ne-fri'tis)	Inflammation of the kidney.
neuritis (nu-ri'tis)	Inflammation of a nerve. The condition is attended by pain and tenderness over the nerve.
neurologis (nu-ro'o-jist)	A physician trained in the treatment of nervous diseases.
neuromuscular (nu-ro-mus'ku-lar)	Pertaining to nerves and muscles.

neurosis (nu-ro'sis)	A nervous disease more especially one without organic change in the nervous system.
neurosurgery (nu-ro-sur'jer-e)	Surgery of the nervous system.
obstetrics (ob-stet'riks)	The art of managing childbirth cases; that branch of medicine which deals with the management of pregnancy and labor.
obstetrician (ob-ste-trish'un)	A physician who practices obstetrics.
obstetrical paralysis	A paralysis due to injuries received at birth.
occipital (ok-sip'i-tal)	Pertaining to the back of the head.
occupational therapy	The use of arts and crafts in treatment of disease for promotion relaxation, coordination and for strength.
orthopedics (or-tho-pe'diks)	The branch of surgery which deals with the correction of deformities and with the treatment of chronic cisease of the joints and spine.
orthopedist (or-tho-pe'dist)	One who practices orthopedics*.
Osgood-Schlatter disease	A condition marked by pain and swelling of the tibia just below the knee cap.
ossification (os'e-fi-ka'shun)	The formation of bone or of a bony substance.
osteitis (os-te-i'tis)	Inflammation of a bone; the disease is marked by enlargement of the bone tenderness and a dull aching pain.
osteochondritis (os'te-o-kon-dri'tis)	Inflammation of both bone and cartilage.

osteochondroma (os'te-o-kon-dri'mah)	Osteoma blended with chondrama; a tumor that is partly bone and partly cartilaginous.
Osteogenesis imperfects (os'te-o-jen'e-sis) (imperfec'ta)	See fragilitas ossium.
Osteoma (os-te-o-mah)	A bone tumor.
Osteomyelitis	Inflammation of bone caused by pus forming organism. It may remain localized or may spread through the bone to involve the marrow, cortex and periosteim.
palsy (pawl'ze)	A synonym for paralysis, used in connection with certain special forms as to denote incomplete paralysis.
paralysis (pah-ral'is-is)	Loss or impairment or motor function in a part due to lesion of the neural or muscular mechanism.
paraplegia (par-ah-ple'je-ah)	Paralysis of the legs and lower part of the body, both motion and sensation being affected.
paraplegic (par-ah-plej'ik)	Pertaining to or of the nature of paraplegia*.
patella (pah-tel'ah)	The kneecap.
pediatrician (pe-de-ah-trish'un)	A specialist in the treatment of children's diseases.
pediatrics (pe-de-at'riks)	That branch of medicine which treats of the child, his diseases, development and care.
pelvis (pel'vis)	The basin shaped ring of bone in the lower part of the trunk; it supports the spinal column.

perception (per-sep'shun)	The receiving of an impression through the senses.
pericarditis (per'e-kar-di'tis)	Inflammation of the pericardium*.
pericardium (per-e-kar'de-um)	The membranous sac which contains the heart.
periosteum (per-e-os'te-um)	The tough fibrous membrane surrounding a bone.
perseveration (per-sev-er-a'shun)	Involuntary persistence of one reply or idea in response to various questions; also a condition in which a movement is repeated.
phalanges (fa-lan'jez)	Any bones of a finger or toe.
physiatrist (fiz-e'at-rist)	A physician who specializes in physical medicine. The employment of physical means in the diagnosis and treatment of disease.
physical therapy (fiz'ik-al ther'ap-e)	The treatment of disease by physical (nonmedical) means, such as heat, massage, hydro therapy, exercise, rest, radiation, and electricity.
pneumothorax (nu-mo-tho'raks)	An accumulation of air or gas in the chest. It may be induced intentionally by injection of nitrogen and is employed for the purpose of collasping the lung in the treatment of pulmonary tuberculosis.
pneumonencephalogram (nu-mo-en-sef'al-o-gram)	An x-ray picture of the brain after air injection.
poliomyelitis (pol'e-o-mi-e-li'tis)	Inflammation of the gray matter of the spinal cord; infantile paralysis.
prognosis (prog-no'sis)	Prediction or forecast as to the probable outcome of an illness.

progressive muscular atrophy	Progressive wasting of muscles with paralysis due to degeneration of the spinal cord.
pronation (pro-na'shun)	The act of turning the palm of the hand downward.
prosthesis (pros'the-sis)	1. The replacement of an absent part by an artificial one. 2. An artificial part such as a limb, eye or denture.
pseudohypertrophis muscular dystrophy	A disease of the muscles beginning with enlargement of the muscles and followed later by wasting.
psychiatry (si-ki'ah-tre)	That branch of medicine which deals with mental disorders and their recognition and treatment.
psychoanalysis (si'ko-ah-nal'is-is)	The method of eliciting from nervous patients an idea of their past emotional experiences and the facts of their mental life in order to discover the mechanism by which a pathologic mental state has been produced and to furnish hints for psychotherapeutic procedures.
psychotherapy (si-ko-ther'ah-pe)	That form of therapy which employs psychological methods in the treatment of functional nervous disorder.
pulmonary (pul'mo-na-re)	Pertaining to the lungs.
quadriplegis (kwod-re-ple'je-ah)	Paralysis of all four limbs.
R.H. Factor	A blood factor which may cause blood transfusion reaction and in new born cause erythroblastosis* fetalis.
radiologist (ra-de-ol'-o-je)	Same as roentgenologist*.

radiology (ra-de-ol'o-je)	The science of radiation which includes x-ray and radium.
radius (ra'de-us)	The bone on the outer or thumb side of the forearm.
reflex (re'fleks)	An automatic action or motion often elicited by tapping a muscle tendon.
rehabilitation (re-hab-il-it-a'shun)	Is a process of restoring the handicapped individual to the full physical, mental, social, vocational and economic usefulness of which he is capable.
residual (re-zid'u-al)	Remaining or left behind.
rheumatic fever	A generalized disease which involves the entire body but which has particular affinity for the joints and connective tissue early in the disease and often creates a long lasting inflammation of the heart. The latter may lead to permanent heart damage, but not always. The fever seems to follow hemolytic streptococcal infections by 2-3 weeks in many children.
rheumatic heart disease	Permanent damage of the heart valve (usually mitral or aortic valves) as a result of rheumatic fever in the past.
rheumatism (ru'ma-tizm)	A disease marked by inflammation of the connective tissue structures of the body, especially the muscles and joints.
rheumatoid arthritis (ru'mah-toid)	A form of chronic joint inflammation attended by moderate pain and which may produce progressive deformity. In children this may be associated

	with severe febrile* illness. Also the disease shows spontaneous remission from time to time. Involvement of the heart is rare.
rickets (rik'ets)	A deficiency disease of infancy and childhood due to lack of vitamin D. The normal process of ossification is disturbed causing bending, distortion and nodular enlargements of the bones.
rigidity (re-jid'i-te)	Stiffness or inflexibility.
roentgenologist (rent-gen'ol'o-jist)	A physician who devotes himself to diagnosis and treatment by the roentgen rays (x-rays).
roentgenogram (rent-gen'o-gram)	An x-ray picture.
sacrum (sa'krum)	A curved triangular bone composed of five united vertebrae forming the posterior boundary of the pelvis.
sarcoma (sar-ko'mah)	A tumor made up of a substance like the embryonic connective tissue.
scapula (skap'u-lah)	The shoulder blade.
scissors gait	Gait characterized by crossing of the legs due usually to spasm of the abductor* muscles of the thigh.
sclerosis (skle-ro'sis)	Induration or hardening.
Sclerotic (skle-ro'ik)	Hard.
scoliosis (sko-le-o'sis)	Curvature of the spine.
sibling (sib'ling)	One or more offsprings of the same parents.
spasm (clonic and tonic)	Involuntary contraction of a muscle or group of muscles. When charac-

	terized by alternate contractions and relaxation it is a clonic spasm; when persistent a tonic spasm.
spasticity (spas-tis'i-te)	Marked hypertonus of muscles.
spina bifida (spi'nah bif'ida)	A congenital malformation consisting of a defect in the vertebrae through which the contents of the spinal canal may protrude.
spinal meningitis (spi'nal men-in-ji'tis)	An inflammation of the membranes of the brain and spinal cord.
spinal puncture	The introduction of a needle into the fluid surrounding the spinal cord for withdrawal of spinal fluid for diagnostic purposes.
splint	Appliance for the fixation of a limb or other part of the body.
stenosis (ste-no'sis)	Narrowing or diminution of any heart passage or cavity.
sternum (ster'num)	The breast bone.
Still's Disease	A variety of chronic polyarthritis affecting children and marked by enlargement of lymph nodes, generally of the spleen and irregular fever.
stump	The distal end of the part of the limb left in amputation.
subluxation (sub-luk-sa'shun)	An incomplete or partial dislocation.
supination (su-pi-na'shun)	The act of truning the palm of the hand or the foot upward.
suture (su'tur)	Surgical stitch, to sew up a wound.

symptom (simp'tum)	Any evidence of disease or of a patients' condition.
symptomatic treatment	Treatment which is effective in dealing with a symptom of a disease but not with the disease itself.
syndrom (sin'drom)	A complex of symptoms; a set of symptoms which occur together; the sum of signs of any morbid state.
systolic (sis-tol'ik)	Pertaining to a phase of heart contraction.
tychycardiac (tak-e-kar'de-ah)	Excessive heart action.
tactile (tak'til)	Pertaining to touch.
talipes (tal'i-pez)	Club-foot; a deformity of the foot in which it is twisted out of position.
talipes equinus (equi'nus)	Foot deformity in which the person walks on toes or fore foot, often due to contracted heel cord.
talipes valgus (val'gus)	A club foot on which the patient walks on the inner border of the foot, the sole being turned outward.
Tendon (ten'dun)	Strong fibrous tissue connecting muscle to bone.
therapist (ther'ah-pist)	A person skilled in the treatment of disease.
therapy (ther'ah-pe)	Treatment.
thorax (tho'raks)	The chest.
thrombosis (throm-bo'sis)	The formation of a plug or clot in the blood vessel or in one of the

	cavities of the heart from coagulation of the blood.
thyroid (thi'roid)	A gland in the neck near the larynx; it contains an organic iodine compound; thyroxin. Congenital absence of the thyroid causes cretinism*. Related to the basal metabolic rate.
tibia (tib'e-ah)	The inner and larger of the leg bones below the knee.
tonus (to'nus)	Tone.
torticollis (tor-te-kol'is)	A contracted state of the cervical muscles producing twisting of the neck and unnatural position of the head.
traction (trak'shun)	Act of drawing or pulling.
trauma (traw'mah)	A wound or injury.
tremor (trem'or or tre'mor)	An involuntary trembling or quivering.
triplegia (tri-ple'je-ah)	Three limbs involved.
tuberculosis (tu-ber-ku-lo'sis)	An infectious disease caused by tubercle bacilli. Any part of the body may be affected.
tuberosity (tu-ber-os'i-te)	A protuberance on a bone.
tumor (tu-mor)	Swelling. A mass of new tissue which persists and grows independently of its surrounding structures, and which has no physiological use.
ulna (ul-nah)	The inner and larger bone of the forearm, on the side of the little finger.
valgus (val'gus)	Knock-kneed.

varus (va'rus)	Having legs bent outward. Bow-legged.
vasomotor (vas-o-mo'ter)	Pertaining to the nervous mechanism which controls the muscular action of blood vessel walls.
vein (van)	Any small cavity, especially either one of the two lower (right and left cavities of the heart or any one of the several cavities of the brain.
vertebra (ver'te-brah) plural (vertebrae)	Any one of the 33 bones of the spinal cord.
vertigo (ver'te-go)	Dizziness or disorder of the equilibrium.
wry-neck	See torticollis.

*Defined elsewhere.

MEDICATIONS CURRENTLY USED FOR TREATING EPILEPSY

Phenobarbital Dilantis sodium Mesantoin	A drug used to control epileptic seizures especially the petit mal.
Tridione Paradione Milontin	A drug used to control epileptic seizures especially the petit mal.
Mysolin	A drug used to control epileptic seizures especially the grand mal and psychomotor types.
Celontin	A drug used to control epilepsy especially the petit mal and psychomotor types.

PREFIXES AND SUFFIXES USED IN MEDICAL TERMS

Prefixes

adeno - denotes relation to a gland or glands

costo - denoting relation to ribs

dys - signifying different painful, bad, impaired, etc.

entero - denoting some relation to the intestine.

hemi - meaning one half

hyper - signifying above or beyond.

infra - denoting beneath or below.

macro - signifying large

micro - signifying small

myo - denoting some relation to muscle or to muscles.

neo - signifying new

ortho - signifying straight, corrected or corrective.

osseo - denoting bone.

peri - signifying around

post - signifying after or behind.

poly - meaning many.

pyo - signifying relation.

supra - signifying union or association

cardi - relation to the heart.

thermo - implying some relation to heat.

dermo - meaning the skin

hydro - signifies water

leuko - denoting whiteness

myelo - refers to brain, spinal cord

neuro - related to nerve or neurology.

ophthalmo - pertaining to the eye.

pseudo - denoting false

retro - backward

Suffixes

-oma - signifying a tumor.

-itis - inflammatory activity.

-tomy - incision.

APPENDIX C

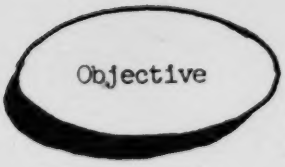
DEVELOPING A MODULE

Because students have a great range of abilities, learning styles, and motivation, some will take longer than others to achieve the required competencies. If each student is allowed to progress at his own rate, it becomes necessary to individualize the instruction. Individualized instruction can effectively be achieved by devising student learning packages called modules. The module is designed for student use and provides the student with the objectives he is asked to achieve, lists a sequence of activities to help him become competent, and outlines an objectively rated performance that will allow him to demonstrate his proficiency. In this module you will learn how to write a student learning package (module).

If you think that you are already able to perform this task, read the Check-Out Activities on the back cover. Then either arrange with your instructor about doing the Check-Out Activities,

or

If you need to complete learning activities in order to be able to do the tasks, find the Learning Activities inside this module and go through them in the order in which they are listed.



Given a performance objective with criterion-referenced measure and performance guide, module worksheets and a handbook for developing modules, develop a module for the objective. Performance will be rated with a checklist. All items must be acceptably completed.

Check-Out Activities

The statement below explains the activity you must be able to complete in order to finish this module. After you complete the activity, your instructor will rate your performance using the Instructor's Final Checklist, DEVELOPING A MODULE.

✓ Your instructor will provice you with a performance objective with criterion-referenced measure and performance guide. He will also give you work sheets. Develop a module for the objective.

Learning Activities

1 → READ Instruction Sheet I, STEPS IN MODULE PRODUCTION.

(or) _____

2 ✓ CHECK YOUR KNOWLEDGE of writing modules by taking Student Self-Check I, WRITING MODULES.

3 → PRACTICE writing module titles by using Instruction Sheet II, MODULE TITLES.

(or) _____

4 → PRACTICE writing module introductions and directions by using Instruction Sheet III, MODULE INTRODUCTIONS AND DIRECTIONS.

(or) _____

5 → READ Instruction Sheet IV, MODULE OBJECTIVES.

(or) _____

6 → PRACTICE writing learning activities by using Instruction Sheet V, MODULE LEARNING ACTIVITIES.

(or) _____

7 → READ Fardig, Handbook for Developing Vocational Education Modules, pages 41-56.

(or) _____

8 → PRACTICE writing an instructor's final checklist by using Instruction Sheet VI, FINAL CHECKLIST.

(or) _____

9 → PRACTICE writing a complete module by using Instruction Sheet VII, DEVELOPING A TOTAL MODULE.

(or) _____

10 ✓ ARRANGE with your instructor to complete this module by going through the CHECK-OUT ACTIVITIES listed on the back cover.

Instruction Sheet I

STEPS IN MODULE PRODUCTION

The Bureau of Vocational Education, State Department of Education has adopted a standard module format for use in all the occupational areas. This format has been designed to ensure uniformity of appearance and consistency of approach. By following the module format, found in "Handbook for Developing Vocational Education Modules," writers will have fewer routine decisions to make and can concentrate on the instructional content of the module. Writers should follow the standard format given in the directions and the examples as closely as possible. The specific content, of course, will be unique to each module.

Each module contains the following elements:

1. Title
2. Introduction
3. Directions
4. Objectives
5. Learning Activities
6. Check-Out Activities
7. Instructor's Final Checklist

The assumption has been made that before module production begins objectives including a performance guide and a criterion-referenced measure, have been written. In the Kentucky system this is accomplished through the V-TECS process. If the area in which you are working has not been through the V-TECS process, the following steps should be accomplished before module production begins:

1. Identify tasks in the occupational area under study.

2. Write objectives, performance guides, and criterion-referenced measures (check-out situations) for all tasks.

The process of module writing can now begin. This process involves the following developmental steps:

1. Organize objectives into blocks.

2. Sequence the objectives in each block.

3. Identify the number of objectives to be included in each module.

Instruction Sheet I (p.2)

(Refer to pp. 2-4 of this instruction sheet for directions on steps 3, 4, and 5.)

4. Write module title.

5. Develop introduction and directions.

6. Write objectives.

7. Develop learning activities to include instruction sheets and student self-checks.

8. Develop check-out activities and instructor's final checklist.

General Guidelines for Clustering and Sequencing

1. Develop the sequence of objectives by employing the structure of the content as a guide. Progress from simple notions to complex principles, from basic tasks to complex and highly skilled ones. Analyze the chain of competencies to determine which skills are required before others can be attempted.

2. Consider the location, tools, and facilities required for various activities. Some objectives relate to subject matter knowledge and may be completed in the classroom. Others require special laboratory facilities or time. Still other objectives require participation on the job site--whether store, office, or shop. Availability of these field settings and cooperative work arrangements may determine where, and in what order, field experiences may occur.

3. In some occupational areas the objectives need to be sequenced to provide one or more exit points to sub-occupations. The objectives reached up to the exit point should provide all the competencies required for the student to successfully enter the sub-occupation.

4. Consider the instructional and learning efficiency of clustering objectives. Objectives that have knowledge or skills relationships, that can be readily learned together, or are convenient

Instruction Sheet I (p.3)

to teach simultaneously, may be clustered into a single module or incorporated into a block of modules.

5. Estimate the time required by an average or typical student to achieve the objective competency when clustering objectives into modules. While there is no time limit for completion, the work involved in completing a module should not be so short as to be trivial (a matter of minutes, for example) or so long as to cause students to become discouraged for lack of frequent reinforcement (as with a module that takes weeks to complete.) Variations in length of estimated completion time are desirable.

Procedure for Clustering and Sequencing

1. Write each of the performance objectives on a separate 3 x 5 index card. The objective can be stated in a very short summary form, as long as the basic idea is captured. Place the objective number (from the V-TECS catalog) on the card's upper right corner.

2. Group relating objectives into blocks. These blocks may be the duty areas in the catalogs such as Performing Clerical Duties or Performing X-Ray Procedures.

3. Put the objectives within each block in a logical teacher order or sequence.

4. Next divide all the objectives within a block into smaller units of work which can reasonably fit into modules or individual student learning packages (usually not more than five objectives and possibly as few as one objective).

5. Decide on a title for each module. The title should be two to five or six words and should describe what the student is going to be doing. The title should be stated in the present participle verb for (ing); e.g. "Cashing Checks," "Adjusting the Carburetor," or "Developing X-Ray Film."

Instruction Sheet I (p.4)

6. Finally, fill in the master sheet for the total program, giving the module number, title and performance objectives in proper sequence. See the attached sample on p. 5 of this instruction sheet.

7. Make a check to be sure that every objective in the V-TECS catalog is accounted for by being included in one of the modules.

Instruction Sheet I (p.5)

PROGRAM SEQUENCE FOOD-PREPARATION I

MODULE NO.	MODULE TITLE	V-TECS OBJECTIVE NO.	OBJECTIVE	SUGGESTED SEQUENCE
BLOCK 1 CLEAN AND SANITIZE				
FP-6	Cleaning Equipment and Work Areas	89	Clean and care for equipment. Practice safety techniques when using, cleaning and caring for equipment.	1
		90	Clean and sanitize Kitchen blocks.	
		91	Clean floors, windows, counters, and tables. Practice personal sanitation.	
FP-7	Washing Dishes	92	Wash dishes, glasses, silverware, trays, pots, and pans by hand and by machine.	2
BLOCK 2 WEIGHTS AND MEASUREMENTS				
FP-8	Weighing and Measuring	2	Increase and decrease recipes.	3
		32	Weigh and measure staple items and ingredients.	
BLOCK 3 BEVERAGES				
FP-10	Making and Pouring Beverages	24	Pour juices and beverages.	4
		33	Brew tea.	
		59	Make coffee.	

Student Self-Check I

WRITING MODULES

Listed below are out-of-order steps for producing a module. Rearrange the steps in correct order. Assume that the performance objectives and criterion-referenced measures are already written.

Process Steps	Correct Order (Indicate with a letter)
a. Develop instructor's final checklist.	1. _____
b. Develop module title.	2. _____
c. Develop module directions.	3. _____
d. List module objectives.	4. _____
e. Develop module learning activities.	5. _____
f. List check-out activities.	6. _____
g. Develop module introduction.	7. _____

Answers:

1. b; 2. g; 3. c; 4. d; 5. e; 6. f; 7. a.

Instruction Sheet II

MODULE TITLES

Strategy for Action

1. Read pages 11-13 "Handbook for the Development of Vocational Education Modules" by Fardig.

2. Listed below are examples of objectives for which modules will be developed. Realistically, most modules will be developed around more than one objective. These are for the purpose of practice in developing modules. Give a module title for each objective. Check your work with your instructor.

   a. Given a vehicle requiring body panel installation (i.e., rocker panel, roof panel, quarter panel, etc.), weld the panel to adjacent parts. All steps on the instructor's checklist must be rated acceptable.

   _____

   _____

   b. Given a cash register and a list of entries, register each entry and a correct total.

   _____

   _____

   c. Given six examples of specimen checks and a Checks Cashed Slip, examine the checks and list on the slip all of the ones which are acceptable.

   _____

   _____

   d. Using the designated tractor, the manufacturer's service manual, shop rags, lubricants, and the necessary tools, service the drive shaft. All parts will be clean and

Instruction Sheet II (p. 2)

lubricated with the recommended lubricant, and there will be no damage to any parts.

Instruction Sheet III

MODULE INTRODUCTION AND DIRECTIONS

Strategy for Action

1. Read pp. 15-21, "Handbook for Developing Vocational Education Modules," by Fardig.

2. Listed below is an objective for which a module will be developed. First give the module for the objective a title; then write an introduction and directions for the module. In writing the directions assume there are no prerequisite modules.

   Objective:

   Given a biopsy specimen, and the necessary supplies and equipment, place the specimen in the specified solution and mail to designated laboratory. All steps in the instructor's checklist must be completed with a satisfactory rating. (1,¶)

   Criterion-Referenced Measure (Check-Out)

   Your instructor will provide you with a biopsy specimen. Preserve and prepare for mailing to the laboratory.

   Performance Guide

   1. Receive dentist's order to preserve specimen.
   2. Prepare 10% formalin solution and fill specimen bottle 3/4 full. Place tissue in solution and seal bottle.
   3. Prepare label and attach to bottle. Include:
      a. name of patient
      b. name of dentist
      c. type of tissue (or other type of specimen)
      d. date
      e. location of area biopsy was taken from
      f. duration of the condition
      g. doctor's tentative diagnosis
      h. instructions for type of examination
   4. Place prepared specimen in mailing container.

Instruction Sheet III (p. 2)

5. Address container and affix correct amount of postage.
6. Mail specimen to laboratory as designated by dentist.
7. Record in patient's folder:
   a. procedure
   b. mailing date
   c. laboratory
   d. a copy of the laboratory orders

Instruction Sheet III (p. 3)

Module Title for the Objective: _____

_____

Introduction:

Directions:

Instruction Sheet IV

MODULE OBJECTIVES

Strategy for Action:

1. Read p. 23, "Handbook for Developing Vocational Education Modules," by Fardig.

2. Page 23 of the handbook refers to those objectives developed in the V-Tecs catalogs. If no catalog of objectives is available in the area in which you are working, objectives must be developed to include conditions, standards, and tasks.

3. In producing modules using a catalog of objectives, copy the objectives as they are in the catalog.

Instruction Sheet V

MODULE LEARNING ACTIVITIES

Strategy for Action:

1. Read pp. 27-40, "Handbook for Developing Vocational Education Modules," by Fardig.

2. Using the objective, module title, introduction, and directions in Instruction Sheet III, write three learning activities that you think would help the student to become competent in the task. Check your work with your instructor.

Learning Activity 1 _____

_____

_____

_____

Learning Activity 2 _____

_____

_____

_____

Learning Activity 3 _____

_____

_____

_____

Instruction Sheet VI

FINAL CHECKLIST

Strategy for Action:

1. Read pp. 57-63, "Developing Vocational Education Modules," by Fardig.
2. Utilizing the information in Instruction Sheets III and IV, write the items to be included in a final checklist for the module:

Instruction Sheet VII

DEVELOPING A TOTAL MODULE

Strategy for Action:

1. Use the performance objective, criterion-referenced measure and performance guide given below:

   or

   Write an equivalent objective in your service area.

2. Using the module worksheets provided, develop a module for the objective you choose.

3. Use the "Handbook for Developing Vocational Education Modules" as a reference while you work.

4. Have your instructor check your module.

Performance Objective

Given a blank deposit slip and funds to be deposited, prepare the deposit slip. This must be done without error. (1)

Criterion-Referenced Measure

Your instructor will provide you with a bank deposit slip, and a list of checks, denominations of paper currency, and coins. Prepare the deposit slip.

Performance Guide

1. Assemble supplies.
2. Sort checks, paper currency, and coins.
3. Prepare deposit slip:
   a. Write date, month, and year at top of deposit slip.
   b. Write dentist's full name at top of deposit slip.
   c. Write account number (if this is used).
4. List each check separately. Write the amount in the dollar and cents column.
5. Total the amount of checks.

Instruction Sheet VII (p. 2)

6. Count paper currency and coins.
7. Enter the amount in the column labeled currency.
8. Total the amount and write it on the deposit slip.
9. Add the total amount of checks and the total amount of currency.
10. Record total amount on bank deposit slip.
11. Check to make sure all checks have been endorsed and the amounts are correct.
12. Take money and deposit slip to bank and deposit the amount.

Instruction Sheet VII (p. 3)

Module No. _____
Objective No. _____

Module Worksheet

INTRODUCTION

Module Title: _____

Module Writer: _____

Approximately 75 to 100 words.
Refer to HANDBOOK, p. 15.

Instruction Sheet VII (p. 4)

Module Worksheet

DIRECTIONS

Module Title: _____

Module Writer: _____

State any prerequisites for the module. Use the model statement.

Refer to HANDBOOK, p. 19.

Directions

Module IE-6

Module No. _____

Instruction Sheet VII (p. 5)

Module Worksheet

OBJECTIVES

Module Title: _____

Module Writer: _____

Objectives taken from the V-TECS catalog of objectives. Use verbatim.

List in the correct instructional sequence, and assign a number.

Refer to HANDBOOK, p. 23.

Instruction Sheet VII (p. 6)

Module Worksheet

LEARNING ACTIVITIES

Module Title: _____

Module Writer: _____

LEARNING ACTIVITIES

No.	→ ✓	Activity

Module IE-6

Module No. _____

Instruction Sheet VII (p. 7)

Module Worksheet

CHECK-OUT ACTIVITIES

Module Title: _____

Module Writer: _____

Use the model statement of directions; modify as necessary.

Check-Out Activities are taken from criterion-referenced measures of the V-TECS catalog.

STATEMENT OF DIRECTIONS	
CHECK-OUT ACTIVITIES	

Instruction Sheet VII (p. 8)

Module Worksheet

INSTRUCTOR'S FINAL CHECKLIST

Module Title: _____

Module Writer: _____

Derive items from the objectives and checklist in the V-TECS catalog. Items are to be in the past tense.

Refer to HANDBOOK, p. 57.

Item No.	Checklist Item

Instructor's Final Checklist

DEVELOPING A MODULE

Check the student's performance in the following elements of developing a module.

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated Not Accomplished, or Partially Accomplished, the student and instructor will discuss this and decide which learning activities must be repeated.

	Student Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
The module:				
1. Included a title	[ ]	[ ]	[ ]	[ ]
2. Included an introduction	[ ]	[ ]	[ ]	[ ]
3. Included the directions	[ ]	[ ]	[ ]	[ ]
4. Included an objective(s)	[ ]	[ ]	[ ]	[ ]
5. Included at least three learning activities .	[ ]	[ ]	[ ]	[ ]
6. Included check-out activities	[ ]	[ ]	[ ]	[ ]
7. Included instructor's final checklist	[ ]	[ ]	[ ]	[ ]
8. Followed format of module development handbook	[ ]	[ ]	[ ]	[ ]

APPENDIX D

EVALUATION

Workshop for Occupational
Home Economics Teachers
Working with Special Needs
Students

Eastern Kentucky University
Home Economics Department
Richmond, Kentucky 40475

Please give careful consideration to your responses. Replies will be used to determine further direction and to plan additional workshops.

Please check the appropriate column:

	Of no value	Less helpful	Appropriate and helpful	Very helpful	Of great value
1. Encounter - Dr. Ann Bardwell					
2. Film, "Path to Fulfillment" EMU					
3. Film, "Try Another Way" TMH					
4. Thelma Experience					
a. Interaction with staff					
b. Interaction with students					
c. Tour of facility					
d. Simulation of a handicap (bound hand)					
e. Free-time interaction with students					
f. Six-hour simulation (wheelchair, crutch)					
5. Thelma Lectures					
a. "What Is A Disability?" Linda Nichols, Adjustment Counselor					

	Of no value	Less helpful	Appropriate and helpful	Very helpful	Of great value
b. "Causes and Types" Linda Omer, Physical Therapist					
c. "Medication" Linda Young, Nurse					
d. "Special Equipment" J. Owen, D. Songlier, Home Economist, Occupat. Ther.					
e. "Psychological and Social Effects" Linda Nichols					
f. "Overview" Jim Williams					
6. Your Teaching Experience at Thelma					
7. Library Experiences					
a. Reference					
b. Documents					
c. Learning Resource Center					
8. Public Law 94-142					
9. Due Process IWP					
10. Module					
a. Guide to Developing Modules					
b. Handouts					
11. Field Trip - Cardinal Hill					
12. Participant Interaction					

13. If you had it to do over, how would you alter this workshop if it were reproduced next summer?

14. Do you think your colleagues (vocational education teachers) would benefit from an inservice workshop of this nature?

15. Do you think your Vocational Education Administrators would benefit from an inservice workshop of this nature?

16. What is your overall rating of this workshop?

17. Additional comments or other remarks?

Class Evaluation

Instructor _____

18. Check the words and phrases you think would describe the instructor of this class. Add anything you think should be in the list.

___Enthusiastic, ___Friendly, ___Aloof or distant, ___Easy, ___Interesting, ___Challenging, ___Demanding, ___Firm, ___Difficult, ___Fair, ___Unfair, ___Boring, ___Exciting, ___Average, ___Above Average, ___Superior, ___Weak, ___Knowledgeable in the field of Special Ed., ___Lacks knowledge in the field of Special Ed., ___Inspiring, ___Shows concern for individual class members, ___Unconcerned about individual class members, ___Comes to class prepared, ___Comes to class unprepared, ___Is well organized, ___Is disorganized, ___Has an objective evaluation system, ___Shows a sense of humor, ___There was too much student participation, ___There was too little student participation, ___Student participation was about right.

Additional Comments: